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ABSTRACT

The document contains the curriculum guides for Grades 4, 5, and 6 developed by Project CHANGE (Concepts of Handicaps and Attitudes Need Guidance and Education), a curriculum designed to improve children's attitudes toward the disabled. The curriculum for Grade 4 focuses on acceptance of self and others (handicapped and nonhandicapped), physiology of the eye, blindness, physiology of the endocrine system; for Grade 5--acceptance of self and others, physiology of the ear, deafness, physiology of the oral mechanism, and speech impairments; for Grade 6--acceptance of self and others, physiology of the central nervous system, epilepsy, basic anatomy, and physical handicaps. Lessons typically include ingenuity exercises; lecture; simulation activities; use of filmstrips, movies, and books; class discussion; and guest speakers (usually disabled persons). Units at each grade level are preceded by a unit outline which identifies learning objectives and concepts. Lesson plans are organized to include information on activity name, learning objective, materials needed, and teaching procedure. Worksheets and handouts appropriate for reproduction are provided when called for in the lesson plans. (DB)

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RIDGELAND PUBLIC SCHOOLS
DISTRICT 122
TITLE IV C - ESEA
PROJECT: C.H.A.N.G.E.
TEACHER MANUAL

CONCEPTS OF HANDICAPS AND ATTITUDES NEED GUIDANCE AND EDUCATION

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INTERMEDIATE CURRICULUM

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EC140652

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OVERVIEW OF THE INTERMEDIATE PROGRAM

FORMAT OF TEACHERS MANUAL

The intermediate program is divided into three separate curricula. Each level is composed of five units. The fourth grade units are: Acceptance of Self and Others (Handicapped and Non-Handicapped), Physiology of the Eye, Blindness, Physiology of the Endocrine System and Diabetes. At fifth grade, the units are: Acceptance of Self and Others (Handicapped and Non-Handicapped), Physiology of the Ear, Deafness, Physiology of the Oral Mechanism and Speech Impairments. The conclusion of the intermediate program is the following sixth grade units: Acceptance of Self and Others (Handicapped and Non-Handicapped), Physiology of the Central Nervous System, Epilepsy, Basic Anatomy and Physical Handicaps. For convenience, the Manual is divided by grade levels. Teachers should view the complete curriculum but need only their specific grade level for instructional purposes.

Each unit at a specific grade level includes:

1. Introduction, objectives and concepts
2. Activities

and a 3. Bibliography.

The introduction provides the rationale and basis background information for the unit. The behavioral objectives state the desired student response/outcome for unit completion. Basic concepts are provided to further clarify each objective.

The Activities section is composed of a series of lesson plans. Each lesson plan includes:

1. Objectives - what the student should be able to do when the activity is completed
2. Materials - what is necessary to teach this lesson

and a 3. Procedure - specific suggestions on how to conduct the class activity or utilize films, filmstrips and books.

The Bibliography contains a brief synopsis of films, filmstrips and books which are appropriate for the unit.

SEQUENCE OF UNITS

Units are arranged in a predesignated order which best accomplishes the over-all goal of the program. The first unit at each level is Acceptance of Self and Others (Handicapped and Non-Handicapped). This unit precedes the study of specific disabilities based on the premise that in order to accept others one must first accept themselves.

In the Intermediate program, the normal functions of the body systems are studied prior to the deficiencies. An example, at the fourth grade level is the unit on the Physiology of the Eye and The Physiology of the Endocrine System which are studied in preparation for the disabilities units of Blindness and Diabetes. This portion of the program is related to the cognitive development of the students in the areas of handicaps.

At each grade level, topics were paired according to the cause-effect relationship of handicaps. For example, at the fourth grade curricula the units on Blindness and Diabetes are linked because of the correlation factor. Diabetes being the number one cause of blindness.

As one examines the fifth and sixth grade units reading through the introduction and concepts, one can see the correlation of the selected topics at each grade level.

The Intermediate program builds the necessary foundation of knowledge which culminates in the Junior High curriculum. For implementation of an effective and successful program,units should be taught in the order which they appear in the Manual.

TEACHING THE CURRICULUM

The program is designed for teachers to complete one activity per week with the students over a period of four months. Each unit covers a time span of three to five weeks. The teacher may choose a lesson plan described in the Activity section of the Manual or use/develop other materials which correlate with the objectives and concepts of the unit. The choice of materials and activities should be based on the objectives of the unit for each grade level and the individual needs of the class. Teachers should know the sequential development of the objectives at all grade levels when choosing Activities for a specific unit. In this way, a cohesive program is presented to the student.

The lesson plans include various types of activities. Among these are:

1. Ingenuity Exercises - Each unit begins with a puzzle or matching exercise which familiarizes the students with the terminology used in the unit.

2. Lectures - For some topics, prepared lectures have been chosen as the best form of presentation. The lectures are based on the concepts and objectives for the unit. Through this format, medical terminology has been reduced to an understandable level for teachers and students while maintaining the predesigned program criteria.

3. Simulation Activities - During these activities the students experience what it's actually like to be handicapped by using a method to simulate a handicapping condition. This might be achieved by activities such as trying to pour water into a cup or find the classroom door while blindfolded.

These activities help the students to understand the problems a handicapped person encounters in daily living. They also establish a basis for acceptance by fostering the development of empathy for the disabled person. All students should have an opportunity to participate in simulation experiences. They should be encouraged to think about and describe how it feels to be handicapped.

4. Filmstrips, movies, and books - Lesson plans using films filmstrips and books are included. These materials help the students to better understand handicapping conditions. They should be used with the specific objective at the grade level. After viewing the material, discussions should help students to achieve the objectives. The lesson plans contain specific directions for use of audio-visual material. These materials are one method for developing empathy.

5. Class discussion - Students should be encouraged to ask questions and talk about their feelings. It is important to accept all feelings - even negative ones. Rather than judge students' feelings, the teachers should help the students to discover why they have a particular feeling.

6. Guest Speakers - Probably the most important and enjoyable activity of the program is providing an opportunity for students to interact with handicapped people. This experience allows the student to perceive the handicapped person as an individual with feelings, needs, talents, and problems similar to themselves.

An especially exciting speaker to invite is a person who is blind and uses a guide dog. Speakers may be found by asking friends, or contacting local agencies such as: The Association for the Blind, Division of Vocational Rehabilitation, Easter Seal Society, United Cerebral Palsy, local hospitals, etc. Speaker discussion topics must be correlated with the objectives at each grade level. Personally meeting someone with a disability in a positive atmosphere is an important experience in developing acceptance and empathy towards handicapped people as worthwhile individuals.

PROGRAM IMPLEMENTATION

LEARNING CENTER INSTRUCTIONS

The material for all Activities at each level are housed in the Learning Center. Materials are stored in appropriately marked unit boxes according to grade levels. All materials which are necessary for the unit can be found in this box.

The teacher checks the unit material box out of the learning center by signing the sign out card located on the top of the unit box.

After each lesson the teacher should place the materials used back in the unit box. The unit material box should then be returned to the learning center so it is accessible to other teachers at this level.

USE OF THE TEACHERS MANUAL

As previously explained in the Overview, one lesson per week (of your choice) from the Activities section is to completed with the students. The unit material boxes contain all the necessary articles for the lesson plan.

Starting with the first unit at your level, select one activity. After teaching the activity turn to the Lesson Plan Checklist located at the end of the unit and write the title of the activity on the line next to the appropriate week. Rate the Activity using the code on the Lesson Plan Checklist.

At the conclusion of each unit select one Activity which has been taught and evaluate this lesson on the Unit Evaluation Form (which follows the Lesson Plan Checklist). A Unit Evaluation Form must be completed for each unit.

CALL IN SCHEDULE

The "Call In" schedule provides the dates when Teacher Manuals are turned into the school office. At this time, the Lesson Plan Checklist and Unit Evaluation Forms are reviewed and initialed by the Principal. Teachers Manuals are then returned promptly to the teachers for continued program implementation.

SPEAKERS LIST

A minimum of one guest speaker per grade level will be arranged by the Principal or a designee. After Speakers have been scheduled teachers will be notified of the date, time and location of the speaking engagement. Whenever possible, teachers will be allowed to sign up for the time of their choice.

Teachers will be notified of speaker cancellations as soon as possible.

ASSESSMENT INSTRUMENTS

A Skill Attainment Checklist has been designed for each level of the program. These instruments are designed to measure the students achievement in terms of grade level objectives and concepts.

Student instruments are given pre and post the intervening program. Both experimental and control students participate in the assessment instruments to determine the statistical level of significance the project has achieved.

Complete instructions for the instruments are packaged with the assessment materials.

READABILITY STUDY

Nancy Updegraff
Reading Consultant

In each of the work sheets the readability level varies from two years below the grade for which the sheet was designed, to a half year above the grade listed on the top of the sheet. Therefore, the majority of the students (with some assistance on terms) should be able to read the worksheets.

Much of the terminology is complicated and difficult to pronounce. It is not important for students to correctly pronounce terms in order to identify them or to read the material around them. If a term seems bothersome tell the student to call it blank or blank and match or read as needed. For word puzzles the student should be able to locate the word or tell it is on a cross word puzzle by process of elimination even though they may not be able to correctly pronounce it. Worksheets can be done orally, in a group or in partners.

ACCEPTANCE OF SELF & OTHERS

(HANDICAPPED AND NON-HANDICAPPED)

INTERMEDIATE LEVEL

PROJECT: C.H.A.N.G.E.
TITLE IV C

INTRODUCING THE UNITS

Project C.H.A.N.G.E. has been written to educate children about handicaps and handicapped people. It also attempts to awaken in the children an understanding that handicapped people have feelings and a sense of self worth just as normal people do. The curriculum and lesson plans are provided by Project C.H.A.N.G.E., but it is the teacher who makes the program a success in the classroom.

In order for the lessons to be more effective, a teacher should become familiar with the topic by reading the objectives and concepts of the unit. A teacher who is acquainted with the information on handicaps feels more confident about relating and discussing it with the students.

As a reinforcement, the teacher should teach the concepts of each unit prior to doing the lesson plans. This can be done by simply reading the concepts to the students and discussing important points with them.

Project C.H.A.N.G.E. provides the information for children to gain knowledge about handicaps and to develop a positive attitude toward handicapped people. It is the teacher who gives the students the opportunity to gain cognitively and affectively by making a conscientious effort to implement Project C.H.A.N.G.E. into the classroom.

PROJECT: C.H.A.N.G.E.
4TH GRADE CURRICULUM
INTRODUCTION: ACCEPTANCE OF SELF AND OTHERS

The first unit focuses on feelings and emotions. The emphasis is on helping students become better able to understand themselves and those around them. The main idea to be stressed is that feelings and emotions are not good or bad and that there are many choices available as to how they may be expressed.

The reason for studying this topic at the beginning relates to the goal for the whole program. Project C.H.A.N.G.E. hopes to help change attitudes towards people with handicaps. If the children are to grow in accepting people who are handicapped, they first must accept themselves.

The basic concepts and objectives which are taught in this unit are:

UNIT	OBJECTIVE	CONCEPT
Acceptance of Self & Others	The student can define emotions	Emotions are the feelings people have about other people, the surrounding world and themselves.
	The students understand all people experience feelings.	Some feelings are love, affection, pride, happiness, confidence, anger, fear, worry, sadness, boredom, etc.
	The students understand feelings or emotions are neither good nor bad.	All feelings are acceptable. There are many ways to express one's feelings. Feelings alone do not make things happen. The manner in which people express themselves causes consequences.
	The student recognizes an understanding of one's own feelings enables alternative selections for the expression of their feelings.	A person can express his feelings better if he understands them. Many things give us cues to our true feelings. Some cues are other people, inner knowledge and dreams. It is possible to have two conflicting feelings at one time. (e.g. anger and love).

PROJECT: C.H.A.N.G.E.
4TH GRADE CURRICULUM
ACCEPTANCE OF SELF AND OTHERS

ACTIVITY:

Word Search Puzzle.

OBJECTIVE:

Children become familiar with vocabulary used in discussions on emotions and feelings.

MATERIALS:

Work Sheet with Puzzle.

PROCEDURE:

Discuss with children what some of their feelings are. Distribute Puzzle and allow them to complete it.

A-2

PROJECT: C.H.A.N.G.E.
4TH GRADE CURRICULUM
ACCEPTANCE OF SELF AND OTHERS
WORD SEARCH PUZZLE

A	X	L	O	V	E	T	V	P	R	S	W	Z	D
N	F	C	O	N	S	E	Q	U	E	N	C	E	S
G	O	F	E	E	L	I	N	G	S	A	D	N	E
E	O	W	E	O	R	R	Y	P	A	F	E	E	T
R	Z	T	E	C	O	N	F	I	D	E	N	C	E
O	L	T	M	A	T	W	O	E	Y	A	M	D	C
C	S	W	O	B	F	I	W	E	A	R	Y	E	T
L	S	O	T	O	G	B	O	O	R	E	D	O	M
M	E	N	I	R	N	G	R	N	N	Q	U	I	T
Y	N	G	O	E	W	O	R	R	Y	U	N	A	P
U	D	E	N	D	I	B	Y	O	E	E	D	O	M
Q	A	R	S	O	T	S	A	B	S	E	N	T	A
N	S	L	N	M	H	A	P	P	I	N	E	S	S
F	P	R	I	D	E	T	E	A	R	E	A	L	I

Word List:

Emotions
Consequences
Love
Affection
Pride
Sadness
Happiness
Confidence
Anger
Fear
Worry
Boredom

NAME: ________________________________

A-2
KEY

PROJECT: C.H.A.N.G.E.
4TH GRADE CURRICULUM
ACCEPTANCE OF SELF AND OTHERS
WORD SEARCH PUZZLE

A	X	L	O	V	E	T	V	P	R	S	W	Z	D
N	F	C	O	N	S	E	Q	U	E	N	C	E	S
G	O	F	E	E	L	I	N	G	S	A	D	N	E
E	O	W	E	O	R	R	Y	P	A	F	E	E	T
R	Z	T	E	C	O	N	F	I	D	E	N	C	E
O	L	T	M	A	T	W	O	E	Y	A	M	D	C
C	S	W	O	B	F	I	W	E	A	R	Y	E	T
L	S	O	T	O	G	B	O	O	R	E	D	O	M
M	E	N	I	R	N	G	R	N	N	Q	U	I	T
Y	N	G	O	E	W	O	R	R	Y	U	N	A	P
U	D	E	N	D	I	B	Y	O	E	E	D	O	M
Q	A	R	S	O	T	S	A	B	S	E	N	T	A
N	S	L	N	M	H	A	P	P	I	N	E	S	S
F	P	R	I	D	E	T	E	A	R	E	A	L	I

Word List:

Emotions
Consequences
Love
Affection
Pride
Sadness

Happiness
Confidence
Anger
Fear
Worry
Boredom

NAME: ______________________________

PROJECT: C.H.A.N.G.E.
4TH GRADE CURRICULUM
ACCEPTANCE OF SELF AND OTHERS

ACTIVITY:

Set of filmstrips and cassettes: Get In Touch With Your Emotions
Part3. "You Can Show Love and Affection"
Part4. "The Brighter Side of Life"

OBJECTIVE:

Students recognize that everyone needs love and affection, and that in order to get love and affection one needs to learn how to give it. It is possible for love and hate to get mixed up.

MATERIALS:

Filmstrips and Cassettes: Get In Touch With Your Emotions
Part 3. "You Can Show Love and Affection"
Part 4. "The Brighter Side of Life" (Kimbo Educational)

PROCEDURE:

Show the two filmstrips and follow the showing with a discussion using the following questions:

1. What is the nicest thing anyone ever said to you? What is the nicest thing you can think of to say to a friend?
2. Why is it sometimes embarrassing to say nice things to people?
3. Is trust necessary in a friendship? Why?
4. Why do we sometimes hate people who love us?
5. Why must a person like himself or herself before someone else can like them?
6. Why is it sometimes so difficult to show love and affection?
7. How can you love and hate someone at the same time?

Suggest that the students read the book, Good and Bad Feelings, by Mark L. Stein or What Makes Me Feel This Way, by Eda Le Shun. It is an excellent book on the topic of feelings and emotions.

PROJECT: C.H.A.N.G.E.
4TH GRADE CURRICULUM
ACCEPTANCE OF SELF AND OTHERS

ACTIVITY:

Set of Filmstrips and Cassettes: Get In Tough With Your Emotions
Part 1. "It's Natural To Be Angry Or Afraid"
Part 2. "Coping With or Copping Out"

OBJECTIVE:

Students recognize the importance of understanding their feelings of anger and fear and learn ways of coping with these emotions.

MATERIALS:

Filmstrips and Cassettes: Get In Touch With Your Emotions
"It's Natural to Be Angry or Afraid"
and "Coping With or Copping Out" (Kimbo Educational)

PROCEDURE:

After viewing the first filmstrip, discuss the material by asking the following questions:

1. Name some situations in which you became angry.
2. How did you react?
3. Could you have handled it differently?
4. What are some things that make you afraid?
5. What did you do?
6. How can you tell someone is afraid?
7. How do you usually react when you are afraid in the company of other people?

With the second filmstrip, set up the following role playing procedures:

1. Set up a situation in which two students are talking during class. A third student turns around to tell the other two students to be quiet, and that child consequently gets in trouble for talking.
2. Set up a situation in which three students are discussing a party they have been invited to, when a fourth child enters the conversation and discovers that he or she has not been invited.

Have these two situations played through having the students show several alternative ways the injured party could respond. Follow this with a discussion of which behavior seems the most appropriate way of handling the situation.

PROJECT: C.H.A.N.G.E.
4TH GRADE CURRICULUM
ACCEPTANCE OF SELF AND OTHERS
(HANDICAPPED AND NON-HANDICAPPED)

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"You Can Show Love and Affection". Getting in Touch With Your Emotions. Kimbo Educational Co., 1975.

PHYSIOLOGY OF THE EYE

INTERMEDIATE LEVEL

PROJECT: C.H.A.N.G.E.
4TH GRADE CURRICULUM
INTRODUCTION: PHYSIOLOGY OF THE EYE

The main focus of PROJECT: C.H.A.N.G.E. is to help change the attitudes of the children towards people with handicaps. In fourth grade the handicaps to be studied are blindness and diabetes. It is felt that to clearly understand a handicap, a person must have a working knowledge of how that particular body part works normally. Thus, before we study blindness we shall study the normally functioning eye.

The basic objectives and concepts to be studied in this unit are:

UNIT	OBJECTIVE	CONCEPT
Physiology of the eye	The student can identify the parts of the eye	The cornea, pupil, iris, lens, vitrious humor, optic disk, retina, (with it's rods and cones) and optic nerve are parts of the eye.
	The student can explain the function of each part of the eye	Light travels through the cornea, into an opening which can adjust to strong or weak light called the pupil. This is surrounded by the colored part of the eye - the iris. The light then travels through the lens which flattens or thickens to focus the image properly on the retina. The light rays then pass through the vitrious humor and focus on the retina, which contains rods and cones which are cells that change the light energy to nerve impulses. These nerve impulses are sent along the optic nerve to the brain.
	The student can define normal vision	Normal vision is often described as 20/20 vision. This means a person can see from a distance of 20 feet what a normal eye can see from that distance. Usually determined by having the subject read letters of various sizes at a distance from the test chart. The result is expressed as a fraction: 20/20

PROJECT: C.H.A.N.G.E.
4TH GRADE CURRICULUM
PHYSIOLOGY OF THE EYE

ACTIVITY:

1) Chart #6 from "The Human Body: Systems for Sensing and Moving"
2) Crossword Puzzle

OBJECTIVE:

Children become familiar with vocabulary used in learning about the physiology of the eye.

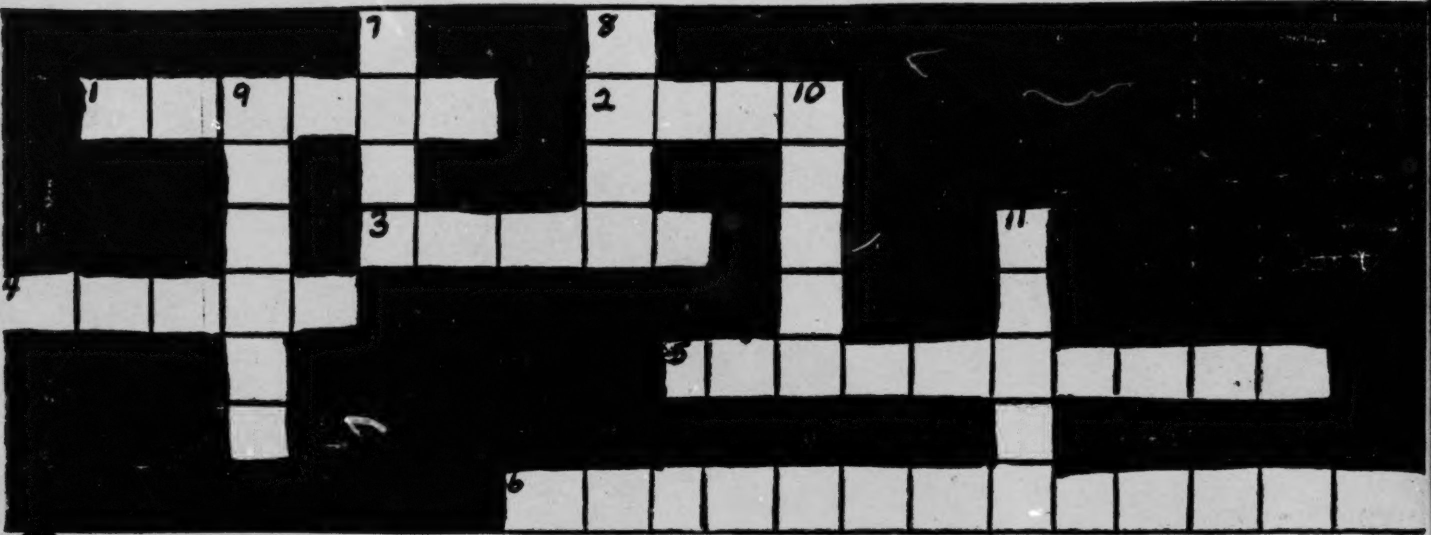
MATERIALS:

1) Chart #6 from "The Human Body: Systems for Sensing and Moving"

PROCEDURE:

Hold up the chart and point out to the class the various eye parts and their function. Eye parts should be listed on the board. The crossword puzzle should be done as a follow up.

PROJECT: C.H.A.N.G.E.
4TH GRADE CURRICULUM
PHYSIOLOGY OF THE EYE

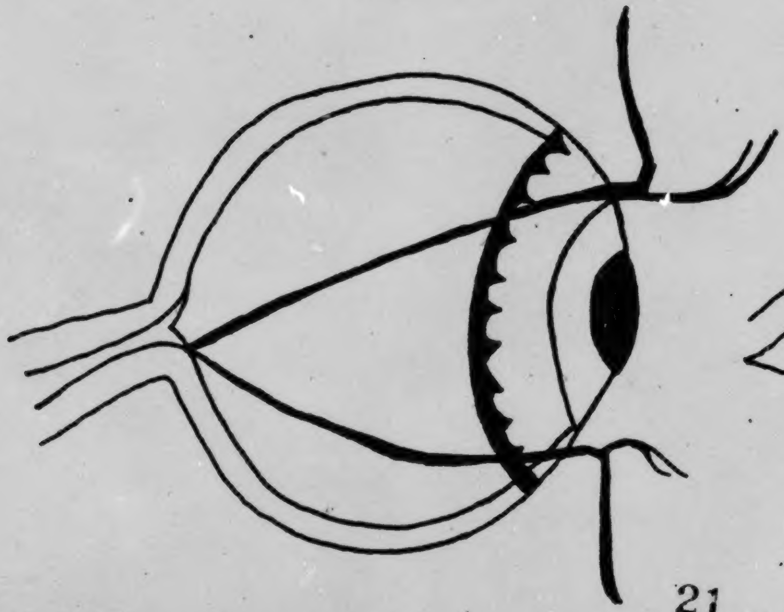


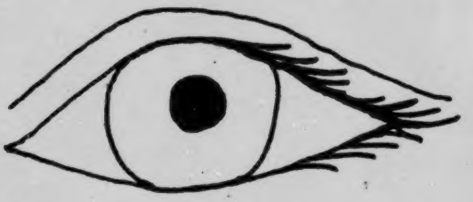
Across:

1. Window-like covering for the eye
2. Stick shaped cell found in the retina
3. We have five of these
4. Hole which light passes through
5. This carries what we see to the brain
6. Jelly-like substance which fills the eye ball behind the lens

Down:

7. Clear tissue which focuses what we see onto the retina.
8. Colored part of our eye
9. Innermost layer of the eye ball upon which the image is focused.
10. One of our five senses
11. Cone shaped cell located in retina





E-2
KEY

PROJECT: C.H.A.N.G.E.
4TH GRADE CURRICULUM
PHYSIOLOGY OF THE EYE
CROSSWORD PUZZLE - ANSWER SHEET

Across:

1. Cornea
2. Rods
3. Senses
4. Pupil
5. Optic Nerve
6. Vitreous Humor

Down:

7. Lens
8. Iris
9. Retina
10. Sight
11. Cones

PROJECT: C.H.A.N.G.E.
4TH GRADE CURRICULUM
PHYSIOLOGY OF THE EYE

ACTIVITY:

Filmstrip "You and Your Eyes"

OBJECTIVE:

Students become familiar with the parts of the eye and how they function.

MATERIALS:

Filmstrip and Cassette "You and Your Eyes", from the series You and Your Health, Walt Disney Educational Media Company

PROCEDURE:

After viewing the filmstrip, discuss the information by seeing if the children can trace the path of light to the brain. Children should name each part of the eye which light passes.

PROJECT: C.H.A.N.G.E.
4TH GRADE CURRICULUM
PHYSIOLOGY OF THE EYE

ACTIVITY:

Diagram of the eye

OBJECTIVE:

Students are able to name the parts of the eye and recognize the location of each part.

MATERIALS:

1) Overheads of diagram of the eye, 2) xeroxed copies of diagram for each child.

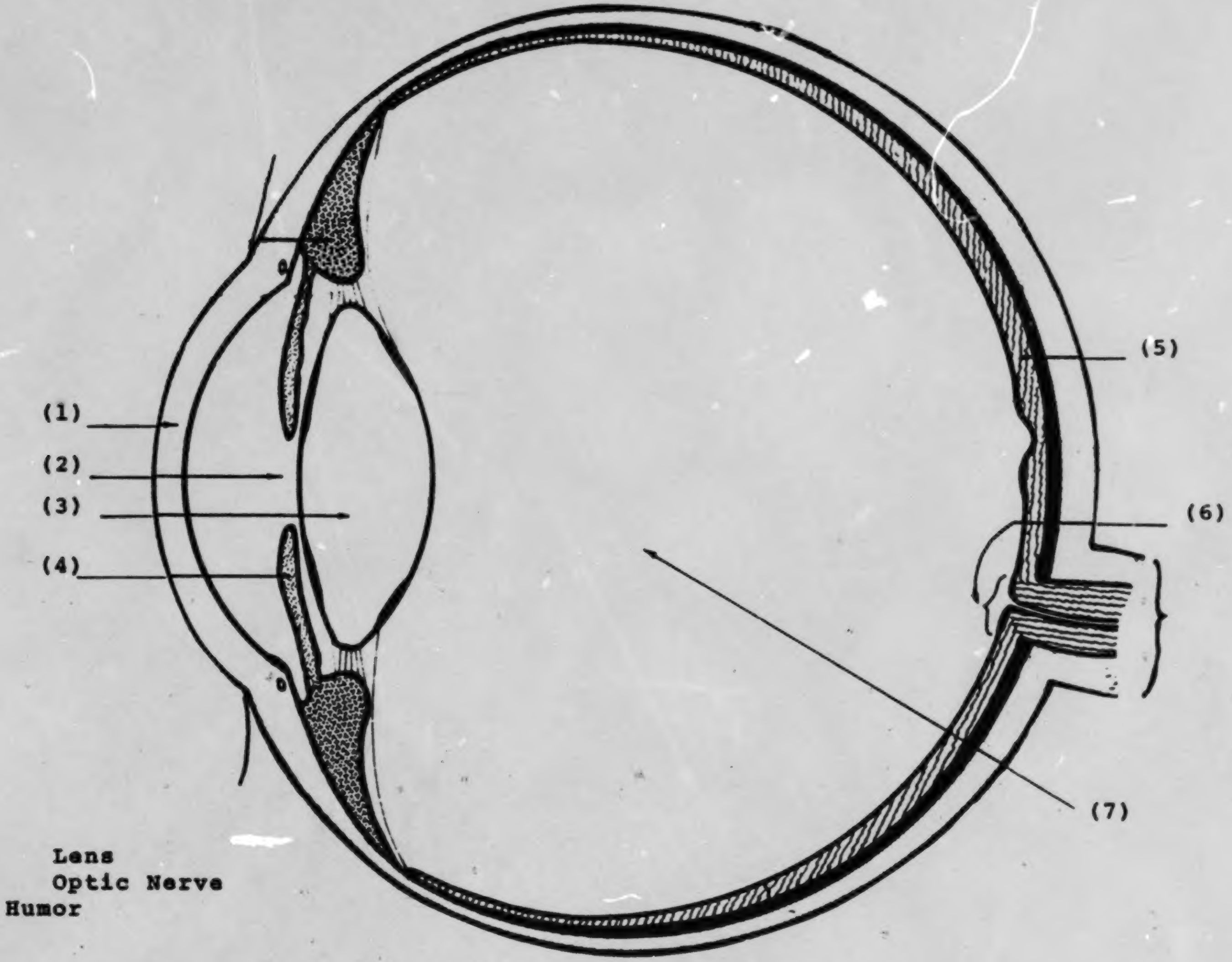
PROCEDURE:

Using overhead projector and the overhead of the eye diagram discuss the parts of the eye with the class. Then pass out copies of the diagram and allow class to label the parts of the eye.

ANSWER KEY TO THE DIAGRAM OF THE EYE:

1) cornea
2) pupil
3) lens
4) iris
5) retina
6) optic nerve
7) vitreous humor

HORIZONTAL SECTION OF A RIGHT EYEBALL



Iris
Retina
Vitreous Humor
Cornea
Pupil
Lens
Optic Nerve

Diagram 1.

PROJECT: C.H.A.N.G.E.
4TH GRADE CURRICULUM
PHYSIOLOGY OF THE EYE

ACTIVITY:

Trace the path of light from the cornea to the brain.

OBJECTIVE:

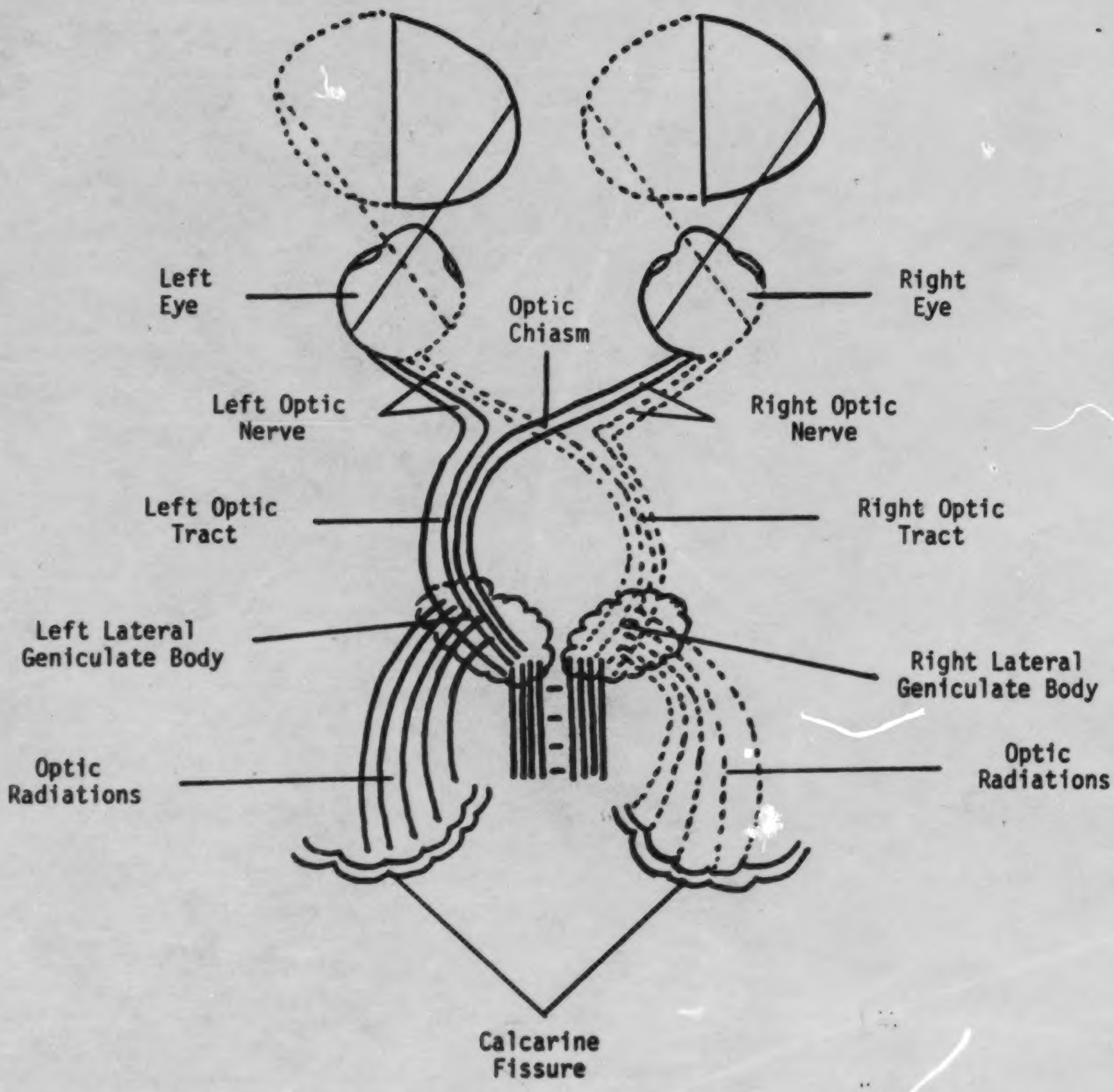
Students understand the parts of the eye. They learn the process by which light travels from the cornea to the brain.

MATERIALS:

1. Overhead of the eye
2. prelabeled worksheet of the eye
3. unlabeled worksheet of the eye (see E-4)

PROCEDURE:

Using the overhead of the eye trace the pathway by which light travels to the brain. As the teacher points to each part of the diagram, the students should recite: 1) cornea 2) pupil 3) lens 4) retina 5) optic nerve 6) brain. Students may enjoy trying to list the parts without using the labels.


Left Eye
Optic Chiasm
Right Eye
Left Optic Nerve
Right Optic Nerve
Left Optic Tract
Right Optic Tract
Left Lateral Geniculate Body
Right Lateral Geniculate Body
Optic Radiations
Optic Radiations
Calcarine Fissure

VISUAL PATHWAYS TO THE BRAIN

Diagram 2.

[112]

PROJECT: C.H.A.N.G.E.
4TH GRADE CURRICULUM
PHYSIOLOGY OF THE EYE

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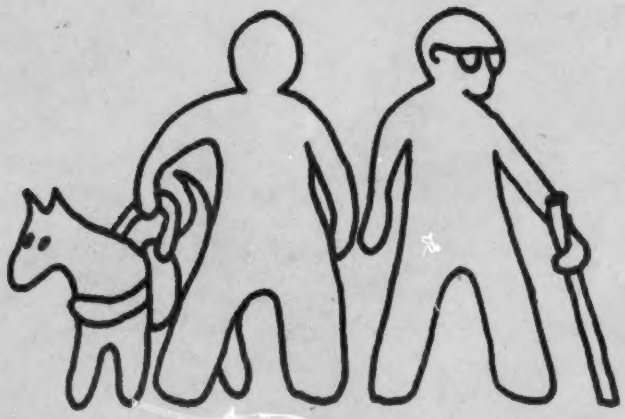
BLINDNESS



INTERMEDIATE LEVEL

PROJECT: C.H.A.N.G.E.
4TH GRADE CURRICULUM
INTRODUCTION: BLINDNESS

In this unit, the topic of blindness is studied. The students will learn about the causes of blindness; the special aids and coping mechanism used by the blind, and the problems the blind person has in getting along in a sighted society.

By studying about blindness, the student will become sensitive to the needs of blind people and realize they share much in common with blind persons.

The objectives and concepts taught in this unit are:

UNIT	OBJECTIVE	CONCEPT
Disability: Blindness	The student can define blindness	Blindness is the partial or total loss of the ability to see. A person is considered to be legally blind whose central visual acuity is 20/200 or less in the better eye with glasses. 20/200 means that a person can see from a distance of 20 feet what a normal eye should see at a distance of 400 feet.
	The student can list the types of blindness	A person who is blind from birth is congenitally blind. A person who lost his or her sight thru injury, accident or disease has acquired blindness. There are four principal kinds of blindness in terms of how much can be seen. A. Total blindness - the person cannot tell light from dark. B. Economic blindness - the person cannot see well enough to make a living in any way that requires the use of his eyes. C. Vocational blindness - the loss of sight that prevents a person from continuing to earn a living in the same kind of work he has been doing. D. Educational blindness - the loss of ability to see that interferes with a person's ability to get an education by the methods that are commonly used in school.

UNIT	OBJECTIVE	CONCEPT
Blindness (cont.)	The student can state some causes of blindness	Blindness can be caused by an injury to the unborn child. Diseases: A. Trachoma is an infection which begins in the lining of the eyelid and spreads to the outside of the eye and produces small ulcers on the cornea and the eyelid. B. Ophthalmia neonatorum is a disease affecting newborn babies which cause ulcers to form on the eyelid, swolle eyelids and a large discharge of pus It is controlled today by dropping silver nitrate into the eyes of newborn babies. C. Iritis is a disease affecting the iris and possibly the muscles controlling the lens. This disease is characterized by pain in the eye or forehead or temple followed by eyeball shrinkage and blindness, if not treated. D. Sympathetic Ophthalma is a disease in which the healthy eye begins to lose sight after the other eye is injured. Sometimes doctors will remove the injured eye to prevent this from occuring. E. Glaucoma is a disease in which the pressure within the eye is increased and causes damage to the optic nerve and may cause blindness. F. Cataracts is a disease cutting off the light that passes through the lens of the eye resulting from age, heredity or injury. G. Retinitis is an inflammation of the retina which could cause damage to the optic nerve. H. Conjunctivitis is the inflammation of the lining of the eyelid. It can be caused by dust or an infection. It is usually mild and can be cured. However, if left untreated, can cause blindness. I. Retinoplathy is a disorder of the retina of the eye. This may be caused by the disease diabetes mellitus. J. Ambliopia is a weakness in the eye caused by overuse of tobacco and alcohol. Symptoms include a cloud appearing before the eye and the person experiences difficulty distinguishing colors.

Unit	Objective	Concept
Blindness (Cont.)	The student can identify areas of difficulty, special needs, and ways of coping with the disability of blindness.	There are several areas of difficulty to be dealt with by a blind person: A. Mobility is difficult due to: 1. Stairs 2. New surroundings 3. Transportation 4. Traffic 5. Elevators 6. Ramps 7. Escalators 8. Weather B. Education is difficult due to the inability to read printed material (regular type) C. Basic self-reliance skills are hard to acquire. Some of these skills are: 1. Eating 2. Personal hygiene 3. Family care 4. Dressing 5. Shopping 6. Food preparation 7. Handling finances 8. Clothes selection D. Certain hazards are more life-threatening to blind people such as: 1. Fire 2. Natural disasters 3. Unexpected obstacles E. There are limitations on employment choices for blind people. F. There are limitations socially and recreationally for the blind person (movies, T.V. dancing, sports).

Unit	Objective	Concept
Blindness (Cont.)	The student can identify areas of difficulty, special needs, and ways of coping with the disability of blindness (cont.)	The blind person can learn to use special techniques and devices to deal with various situations. Some of these are: 1. Guide dogs 2. Development of all other senses to a higher degree than usual. 3. Canes 4. Special watches 5. Braille typewriter 6. Tapes 7. Styllus 8. Placement of food according to clock 9. Special glasses or lenses for partially sighted 10. Modification of home environment 11. Proper assistance by other people 12. Optagon 13. Special computerized devices
	The student recognizes that handicapped people (blind) are worthwhile individuals.	Blind people have the same basic needs as people who are sighted. Blind people may have difficulty coping with the misconceptions some people have about their handicap.

PROJECT: C.H.A.N.G.E.
4TH GRADE CURRICULUM
BLINDNESS

ACTIVITY:

Blindness Definition Sheet

OBJECTIVE:

The children become familiar with the terminology used in the study of blindness.

MATERIALS:

Blindness definition sheet

PROCEDURE:

Read over the Blindness definition sheet with the class stopping to clarify any difficulties the class may have understanding the definitions. Have the children keep the Blindness Definition Sheet on hand as it is necessary for the implementation of the next two activities.

PROJECT: C.H.A.N.G.E.
4TH GRADE CURRICULUM
BLINDNESS
DEFINITION SHEET

These are important words for you to know in order to understand blindness.

KINDS OF BLINDNESS:

Congenitally blind - a person who is blind from birth

acquired blindness - a person who lost his or her sight through accident, injury or disease.

total blindness - a person cannot tell light from dark.

economic blindness - a person cannot see well enough to make a living in any way that requires sight.

vocational blindness - the loss of sight that prevents a person from continuing to earn a living in the same kind of work he has been doing.

educational blindness - the loss of ability to see that interferes with a persons ability to get an education by the methods that are commonly used in school.

DISEASES CAUSING BLINDNESS:

trachoma - an infection which produces small ulcers on the cornea and the eyelid.

ophthalmia neontatorum - a disease affecting newborn babies, controlled with silver nitrate drops.

Iritis - a disease affecting the iris and possibly the muscles controlling the lens followed by eyeball shrinkage and blindness when not treated.

Sympathetic Ophthalma - a disease in which the healthy eye begins to lose sight after the other eye is injured.

Glaucoma - a disease in which the pressure within the eye is increased and causes damage to the optic nerve and and may cause blindness.

Cataracts - a disease cutting off the light that passes through the lens of the eye resulting from age, heredity or injury.

Retinitis - an inflammation of the retina which could cause damage to the optic nerve.

Conjunctivitis - an inflammation of the lining of the eyelid. It can be caused by dust or an infection. It is usually mild and can be cured, but if left untreated can cause blindness.

Retinoplathy - a disorder of the retina of the eye. This may be caused by diabetes mellitus.

Ambliopia - a weakness of the eye caused by overuse of tobacco and alcohol. Symptoms include a cloud appearing before the eye and the person experiences difficulty, distinguishing colors.

DIFFICULTIES DEALT WITH BY BLIND PERSONS:

1. **Mobility** - ability to move about. This may be hampered by:
    1. Stairs
    2. New surroundings
    3. Transportation
    4. Traffic
    5. Elevators
    6. Ramps
    7. Escalators
    8. Weather
2. **Education** - difficulty due to inability to read language
3. **Basic Self - reliance skills** - ability to do things by ones self. These skills are:
    1. Eating
    2. Personal hygiene (keeping clean)
    3. Family care
    4. Dressing
    5. Shopping
    6. Food preparation
    7. Handling finances (money)
    8. Clothes selection
4. **Hazards - dangers**
    1. Fire
    2. Natural disasters eg. earthquakes
    3. Unexpected obstacles
    4. Difficulties obtaining a job
    5. Social and recreational Difficulties

AIDES AND DEVICES FOR THE BLIND:

1. Guide dogs
2. Development of all other senses to a higher degree than usual.
3. Canes
4. Special watches

5. Braille typewriter
6. Tapes
7. Styllus - (a stick like instrument used in writing braille
8. Placement of food according to the clock
9. Special glasses or lenses for the partially sighted
10. Modification of home environment
11. Proper assistance by other people
12. Optagon - (a machine for making print larger)
13. Special computerized devices.

PROJECT: C.H.A.N.G.E.
4TH GRADE CURRICULUM
BLINDNESS

ACTIVITY:

Game using Blindness
Definition Sheet

OBJECTIVE:

The children will recognize the terminology and words used in the study of blindness.

PROCEDURE:

1) choose one child to keep score. 2) Divide the class into two teams. 3) Cut out the definitions from only one of the Blindness definition sheets. 4) Fold each definition twice and place in a wide mouthed container. 5) Choose one child from either team to come up and pick one of the definitions and read it to the class. 6) Allow a member of the opposing team to guess the correct meaning first. 7) If that child misses the other team gets to try and so on until the correct meaning is given. 8) The team which gives the correct answer receives a point which is recorded on the board by the score keeper. The game may end when all the definitions have been used once or play may continue until the teacher decides to end it. After the definitions have all been used they can be refolded and returned to the container to be reused.

PROJECT: C.H.A.N.G.E.
4TH GRADE CURRICULUM
BLINDNESS

ACTIVITY:

Blindness Vocabulary Puzzle

OBJECTIVE:

The children will become familiar with the terminology of the blindness unit.

MATERIALS:

Blindness Vocabulary Puzzle
Blindness Definition Sheet

PROCEDURE:

1. Duplicate a copy of the puzzle for each member of the class
2. Follow the directions on the puzzle
3. Children are allowed to use the Blindness Definition sheet when completing the puzzle.
4. The puzzle may also be used as an evaluation tool to measure performance on the Blindness Definition Sheet.

ANSWER KEY FOR BLINDNESS VOCABULARY PUZZLE:

BLINDNESS VOCABULARY

PROJECT: C.H.A.N.C.E.
4TH GRADE CURRICULUM
BLINDNESS VOCABULARY PUZZLE

NAME ____

Match the meanings on the right side with the words on the left side to find the secret word.

_____	1. Congenitally Blind	E.	Person who became blind through accident, injury or disease.
_____	2. Ophthalmia Neontorum	U.	A disease which produces small ulcers on the cornea and eyelid.
_____	3. Economic blindness	B.	Person who is blind from birth.
_____	4. Glaucoma	L.	A disease in which the lining of the eyelid becomes inflamed.
_____	5. Stylus	R.	A disease causing the inflammation of the retina.
_____	6. Ambliopia	D.	Stick-like instrument used in writing Braille.
_____	7. Acquired blindness	N.	A disease caused by the overuse of tobacco and alcohol.
_____	8. Braille	V.	A disease cutting off light that passes through the lens usually affecting older persons.
_____	9. Educational Blindness	I.	Person cannot do any job requiring the use of his or her eyes.
_____	10. Cataracts	Y.	One of the difficulties faced by blind persons.
_____	11. Vocational blindness	C.	A disease affecting the iris and possible the muscles controlling the lens.
_____	12. Iritis	A.	Machine for making print larger.
_____	13. Optagon	B.	A disease which affects the retina which may be caused by diabetes.
_____	14. Retinoplathy	A.	Fire, natural disasters, unexpected obstacles are these for blind persons.

PROJECT: C.H.A.N.G.E.
4TH GRADE CURRICULUM
BLINDNESS VOCABULARY PUZZLE - 2

____ 15. Trachoma

____ 16. Conjunctivitis

____ 17. Hazards

____ 18. Retinitis

____ 19. Mobility

S. A person cannot get an education by methods used in ordinary schools.

S. System of raised dots which can be read by touch.

L. A disease affecting newborn babies controlled today by silver nitrate drops.

N. A disease in which the pressure within the eye is increased causing damage to the optic nerve.

O. A person can no longer work at a job he has been doing.

PROJECT: C.H.A.N.G.E.
4TH GRADE CURRICULUM
BLINDNESS

ACTIVITY:

Blind Wordgram

OBJECTIVE:

To enable the students to become familiar with some of the famous people and terminology associated with blindness.

MATERIALS:

Puzzle "BLIND WORDGRAM".

PROCEDURE:

Have the students circle the words at the bottom of the list as they find them in the puzzle. As an extra assignment for interested pupils, research may be done to learn about the people and the terms listed. These reports may be shared with the class.

B C O E M R T Y D L E H E S N
I A R B L I S C A N E A N N A
T R B E B A B U O L S G A D V
E T Y E O G O D E D I U G S I
N A B P L I E N S O Y E P O L
E S U B T Y K A M C B S Y L L
B S Y A D E L L I A R B I E U
I E I L L U S R A D T L M O S
L N B L O U I S B R A I L L E
N K E B A E H B D A E N A O N
B R A I L L E R U D T D B E N
E A C L B O L E N G I O T Y A
E D O G T Y E Y R E N K E E B

BLIND WORDGRAM

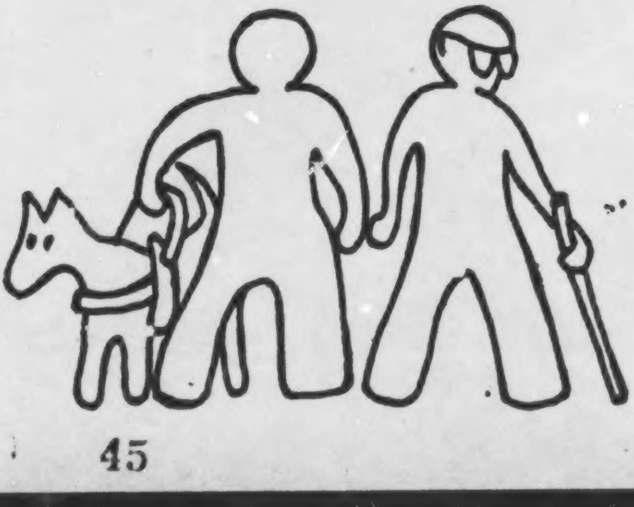
BLIND
DARKNESS
CANE
GUIDE DOG
BRAILLE
HELEN KELLER
LOUIS BRAILLE
EYES
BRAILLER
BEEP BALL
ANNE SULLIVAN

B-8
KEY

B C O E M R T Y D L E H E S N
I A R B L I S C A N E A N N A
T R B E B A B U O L S G A D V
E T Y E O G O D E D I U G S I
N A B P L I E N S O Y E P O L
E S U B T Y K A M C B S Y L L
B S Y A D E L L I A R B I E U
I E I L L U S R A D T L M O S
L N B L O U I S B R A I L L E
N K E B A E H B D A F N A O N
B R A I L L E R U D T D B E N
E A C L B O L E N G I O T Y A
E D O G T Y E Y R E N K E E B

BLIND WORDGRAM

BLIND
DARKNESS
CANE
GUIDE DOG
BRAILLE
HELEN KELLER
LOUIS BRAILLE
EYES
BRAILLER
BEEP BALL
ANNE SULLIVAN



PROJECT: C.H.A.N.G.E.
4TH GRADE CURRICULUM
BLINDNESS

ACTIVITY:

Film "HAROLD"

OBJECTIVE:

Students become aware of the special coping problems of the blind.

MATERIALS:

Film " HAROLD" and Film Guide (Encyclopedia Britannica Educational Corporation).

PROCEDURE:

After viewing the film, ask the class questions about blindness from the guide (answers provided - No. 2 Film Guide). When the class has finished answering these questions, continue the discussion by asking them the following questions:

1. How did you feel while watching the film?
2. How did you feel toward Harold?
3. Have you ever known anyone who was blind? How did you feel about that person? In what ways was he or she like Harold?
4. Consider the non-verbal cues we all give when speaking to others. How would not being able to give those cues affect conversation with Harold?
5. How was Harold'r life different from yours?
6. How do you think Harold feels about himself?

PROJECT: C.H.A.N.G.E.
4TH GRADE CURRICULUM
BLINDNESS

ACTIVITY:

Filmstrip "LAURA".

OBJECTIVE:

The students will understand the special problems faced by a blind person.

MATERIALS:

Filmstrip and cassette "LAURA" (Pomfert House)

PROCEDURE:

After viewing the filmstrip, ask the following questions for diccussion.

1. What devices did you see Laura use to help her learn?
2. What devices did she use to help her get around?
3. What other problem did she have besides her blindness?
4. What caused her blindness?
5. Was her blindness acquired or congenital?
6. What problems did she experience with her sighted classmates?

PROJECT: C.H.A.N.G.E.
4TH GRADE CURRICULUM
BLINDNESS

ACTIVITY:

Filmstrip "FEELINGS SAY IT ALL"

OBJECTIVE:

Students are aware of the coping problems of a blind student in a regular classroom.

MATERIALS:

Filmstrip and cassette "FEELINGS SAY IT ALL" (Paramount Communications.)

PROCEDURE:

After viewing the filmstrip, discuss the following questions:

1. What did Eric need to learn first when he came to the new school?
2. Could Eric hear better than other children?
3. How should children help a blind student get around?
4. What were Eric's books like?
5. What contributions did Eric make to the class?
6. Should the children help Eric all the time?
7. How does Eric write out his homework?
8. How did the children change their attitudes towards Eric?

PROJECT: C.H.A.N.G.E.
4TH GRADE CURRICULUM
BLINDNESS

ACTIVITY:

Filmstrip "VISUAL IMPAIRMENT."

OBJECTIVE:

Students are aware of the problems caused by blindness in everyday life.

MATERIALS:

Filmstrip and cassette "VISUAL IMPAIRMENT" (Stanfield Associates)

PROCEDURE:

After viewing the filmstrip, discuss the film using the following questions:

1. What does 20/20 vision mean?
2. What does a person who sees 20/200 see?
3. What is the definition of blindness?
4. Can blind people see anything?
5. Does the girl in the film have congenital blindness or acquired blindness?
6. What aids does she use?
7. Many visually handicapped people can see differently. Name some of the visual problems some visually handicapped have?
8. What is learning to get around called?
9. What are some devices visually handicapped people may use to read?
10. How does Tony want to be treated?
11. What is the proper way to lead a blind person?

PROJECT: C.H.A.N.G.E.
4TH GRADE CURRICULUM
BLINDNESS

ACTIVITY:

Signature Card and Writing Board.
"Tell by Touch" Game.
Stylus and punch cards.
Braille Alphabet.

OBJECTIVE:

The students understand the techniques developed to compensate for the loss of sight and gain insight into what it's actually like to be blind.

MATERIALS:

1. Signature card and writing board (lined cardboard).
2. The "Tell by Touch" Game.
3. Stylus and punch cards.
4. Braille Alphabet
5. Two blindfolds.

PROCEDURE:

Arrange the class in three groups. Explain the use of each item. Allow each group about fifteen minutes for each project. Then switch games until every group has had a chance to play with each.

Group 1. Practice writing with the signature card and writing board blindfolded.

Group 2. Practice putting pieces into Tell by Touch game blindfolded.

Group 3. Practice using stylus and punch cards with the Braille Alphabet Card.

PROJECT: C.H.A.N.G.E.
4TH GRADE CURRICULUM
BLINDNESS

ACTIVITY:

Read the books: "SOUND OF SUNSHINE and CONNIES NEW EYES".

OBJECTIVE:

This is to provide further research and understanding of blindness and is meant for those students whose interest carries them further than the rest of the class.

MATERIALS:

SOUND OF SUNSHINE by Florence Parry Heide (Parents Magazine Press)
CONNIES NEW EYES by Bernard Wolf (J.M. Lippincott Co.)

PROCEDURE:

Children read the books and write down in a report the title, author, and a brief summary of the book. These reports may be shared with the class.

PROJECT: C.H.A.N.G.E.
4TH GRADE CURRICULUM
BLINDNESS

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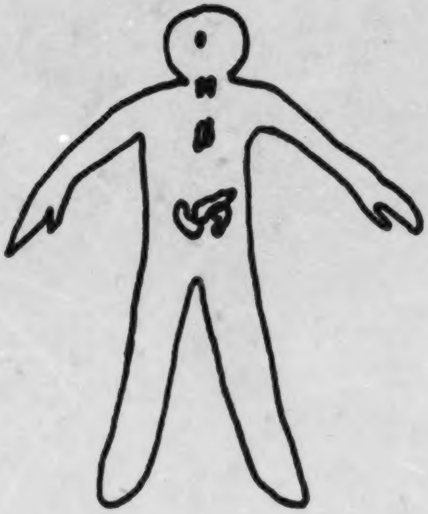
PHYSIOLOGY OF THE ENDOCRINE SYSTEM



INTERMEDIATE LEVEL

PROJECT: C.H.A.N.G.E.
4TH GRADE CURRICULUM
INTRODUCTION: PHYSIOLOGY OF THE ENDOCRINE SYSTEM

The purpose of studying the Endocrine System is to prepare the students for the study of diabetes, which will be covered in the next unit. In this unit, the students explore the various glands in the Endocrine System and learn their functions. Special emphasis should be placed on the pancreas, and the islets of Langerhans since their malfunctioning causes diabetes.

The objectives and concepts to be studied in this unit are:

UNIT	OBJECTIVE	CONCEPT
Physiology of the Endocrine System	The student can understand the basic functions of the endocrine system	The endocrine system consists of a group of ten ductless glands which secrete hormones which pass directly into the blood stream where they act to control and integrate various bodily activities.
	The student can identify and locate some of the glands which control growth, metabolism, and other bodily activities.	The pituitary or master gland controls other endocrine glands and controls the growth of the whole body. It is located at the base of the brain. The thyroid gland, located alongside the windpipe in the neck controls the rate at which the body uses food and oxygen. There are two adrenal glands, one above each kidney. In times of danger, these glands secrete a hormone which enables a person to react quickly in times of fright and anger. The pancreas which is located just behind the stomach contains groups of beta cells of the islets of Langerhans. One of the hormones produced by these cells is insulin. Insulin is essential for the proper metabolism of blood sugar (glucose) and for maintenance of proper sugar level in the blood.

PROJECT: C.H.A.N.G.E.
4TH GRADE CURRICULUM
ENDOCRINE SYSTEM

ACTIVITY:

Chart #8 on the Endocrine System.

OBJECTIVE:

Students become familiar with the function and location of each of the endocrine glands.

MATERIALS:

Endocrine System Chart from "The Human Body Systems for Sensing and Moving" (E.B.E.C.)

PROCEDURE:

Hold up chart and guide children to locate each endocrine glands. Function of each gland may be read from the back as each gland is pointed out by the teacher. Children may be encouraged to reproduce the chart putting in and labelling each gland. Special emphasis should be given to the pancreas since diabetes will be studied next.

PROJECT: C.H.A.N.G.E.
4TH GRADE CURRICULUM
PHYSIOLOGY OF THE ENDOCRINE SYSTEM

ACTIVITY:

Endocrine System Crossword Puzzle.

OBJECTIVE:

The students learn the vocabulary used in discussing the Endocrine System.

MATERIALS:

Endocrine Crossword Puzzle

PROCEDURE:

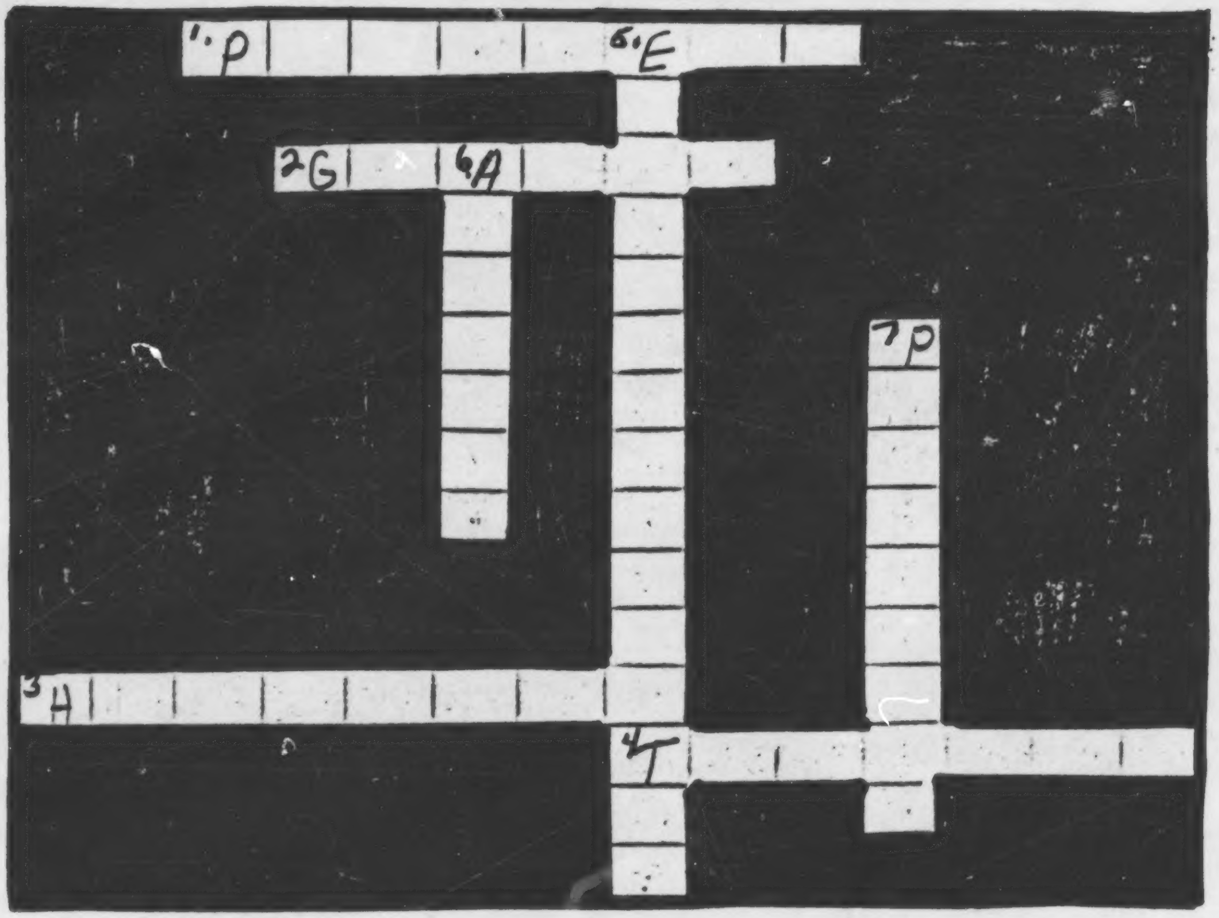
Have the students find the words which go into the puzzle. Allow them to complete the puzzle and discuss the finished results.

ANSWER KEY FOR ENDOCRINE SYSTEM CORSSWORD PUZZLE:

ACROSS	DOWN
1. Pancreas	5. Endocrine System
2. Glands	6. Adrenal
3. Hormones	7. Pituitary
4. Thyroid	

NAME ____

ENDOCRINE SYSTEM CROSSWORD PUZZLE



ACROSS

1. An organ located behind the stomach containing groups of cells called the islets of Langerhans which produce insulin.
2. Cells or groups of cells which prepare and secrete a substance for further use or discharge from the body.
3. Products of the glands in the Endocrine System.
4. A gland located alongside the windpipe in the neck which controls the rate at which the body uses food and oxygen.

DOWN

5. A system of ten ductless glands which produce hormones which control and integrate various bodily activities.
6. One of two glands located above each kidney which in times of danger or anger secrete a hormone which enables a person to react quickly.
7. A gland located at the base of the brain called the master gland for it controls the other endocrine glands and the growth of the body.

PROJECT: C.H.A.N.G.E.
4TH GRADE CURRICULUM
ENDOCRINE SYSTEM

ACTIVITY:

Filmstrip - "The Human Endocrine System"

OBJECTIVE:

To review the various glands of the Endocrine System and their functions.

MATERIALS:

Filmstrip and casette - "The Human Endocrine System" (Encyclopedia Britannica)

PROCEDURE:

After viewing the filmstrip, discuss it using the following questions

1. What helps control and balance the systems of the central nervous system and endocrine system?
2. What does the pituitary gland do?
3. What does the thyroid gland do?
4. Where are the Parothyroid glands? What do they do?
5. Where is the pancreas? What does it do?
6. Where are the adrenal glands? What do they do?
7. What is the function of the testes and ovaries?
8. What is glucose? How is it controlled?
9. Where does insulin come from? What does it do?
10. What is a feedback loop?
11. What are some of the changes which occur in the body at different times of the day or during different activities?

ACTIVITY:

Book - Endocrine System by Alvin Silverstein and Virginia B. Silverstein

OBJECTIVE:

To provide more information on the Endocrine System to students who want to carry their investigation of the Endocrine System further.

MATERIALS:

Book - Endocrine System by Alvin Silverstein and
Virginia Silverstein
(Prentice Hall, Inc.)

PROCEDURE:

Have the children read the book and write a brief report. They should include the title and the author and list the new information they learned by reading the book.

PROJECT: C.H.A.N.G.E.
4TH GRADE CURRICULUM
PHYSIOLOGY OF THE ENDOCRINE SYSTEM

ACTIVITY:

Research project on one gland of the endocrine system

OBJECTIVE:

Student writes a report stating the location and function of one organ of the endocrine system.

MATERIALS:

Reference materials from the library/learning center

PROCEDURE:

Have students choose one gland from the endocrine system for research. The students may choose the pituitary, thyroid, adrenal gland, or pancreas. In their reports the students should include: 1) the location of the gland. 2) the hormones secreted by the gland 3) what the release of the hormone enables the body to do and 4) a diagram of the gland in its correct location in the body.

PROJECT: C.H.A.N.G.E.
4TH GRADE CURRICULUM
PHYSIOLOGY OF THE ENDOCRINE SYSTEM

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DIABETES

INTERMEDIATE LEVEL

PROJECT: C.H.A.N.G.E.
4TH GRADE CURRICULUM

INTRODUCTION: DIABETES

Diabetes is studied because it is a disease affecting many people in our society. It is also one of the major causes of blindness. The students will know the symptoms of diabetes and the measures used to control it. Through this knowledge an acceptance and understanding of diabetes will be developed.

The objectives and concepts for this unit are:

Unit	Objective	Concept
Handicap: Diabetes	The student can define diabetes and various types (juvenile and adult onset)	Diabetes mellitus is a chronic disease characterized by abnormalities of the endocrine secretions of the pancreas, resulting in disordered metabolism of carbohydrates, fat, and protein and in time structural abnormalities in a variety of tissues. Diabetes is a long term physical condition in which the body cannot make use of sugars and starches in a normal way. Juvenile diabetes is a severe form usually appearing in childhood or adolesence. It can progress rapidly and may shorten life expectancy. It can cause blindness and kidney failure and is marked by a total lack of insulin. Maturity-onset diabetes is usually less abrupt in onset and less severe than the juvenile type. Some adult onset diabetics usually can produce some insulin. Some may have normal or even elevated insulin production, but their bodies just can't use the insulin efficiently. Diabetes is a disease that cannot be cured but usually can be controlled with the use of a planned diet (i.e. measured amounts of fats, protein and carbohydrates) and/or medication and exercise. Diabetes is not a contagious disease.

Unit	Objective	Concept
Diabetes (Cont.)	The student can identify symptoms of diabetes mellitus.	Some diabetics (especially those who are older) may experience few symptoms or no symptoms at all. Today many cases are detected before symptoms appear. Some symptoms are: frequent urination, excessive thirst, extreme hunger, rapid weight loss, drowsiness, easily tiring, general weakness, blurred vision, skin infections, boils, etc.
	The student can state that certain age groups and types of people are more susceptible to diabetes.	People with diabetic relatives (heredity may be a strong factor in diabetes). Diabetes is usually a disease of middle age and old age, (usually occuring in those over 30 - accounting for 90% of the population). People who are overweight. More women than men are diabetics (two out of every three diabetics are women). Juvenile-onset diabetes usually develops abruptly during childhood or puberty and is a severe form of diabetes marked by a total lack of insulin.
	The student can identify the ways of treating and controlling diabetes.	In some patients, diabetes can be controlled by a special diet and exercise alone. The diet consists of a controlled amount of carbohydrates, fats and proteins. It is a highly individual diet. If over-weight, it may be necessary for the individual to control calorie intake. Usually in the individual with mild diabetes, the disease is controlled by the use of diet, exercise and oral medication. Oral medication is not insulin; it stimulates the pancreas to produce it's own insulin.

Unit	Objective	Concept
Diabetes (Cont.)		When neither diet nor medication is sufficient to control diabetes, insulin (extracted from the pancreas of animals) must be used. Insulin is taken by injection, for it is destroyed in the stomach by gastric juices if taken orally. Diet and exercise are also used in conjunction with the insulin. This is always the treatment in juvenile diabetes and sometimes necessary in mature onset diabetes. It is necessary for diabetics to test their urine daily. This tells whether the level of the blood sugar is too high(with too much sugar). This test consists of dipping a specially prepared strip of paper into a urine sample. The color of the paper is then compared to a color chart to determine the appropriate sugar level.
	The student can identify that reactions requiring emergency treatment can occur due to carelessness, severe emotional stress, illness or lack of medical treatment in unknown diabetes.	Insulin reaction occurs when the level of the blood sugar is too low due to too much insulin, too little food, or over-exercise. It occurs most often in those who take insulin, or occasionally in those who take oral medication. The warning signs are pale, moist skin, excited behavior, normal to shallow breathing, hunger, slight or no sugar in the urine,and weakness. Proper treatment would be medical attention during which the individual would be given some form of sugar. Acidosis or diabetic coma occurs when the level of body insulin is too low due to neglect in taking prescribed medication daily, poor diet, illness, or excessive exercise. This can cause an excess of fatty acids in the body (acidosis) and lead to diabetic coma. The warning signs are flushed, dry skin, a gradual onset of symptoms, drowsy behavior, fruity odor on the breath, deep labored breathing, vomiting, dry tongue, thirst, and large amounts

Unit	Objective	Concept
Diabetes (Cont.)		of sugar in urine. Proper treatment would be immediate medical attention during which the individual would receive proper insulin injection.
	The student recognizes that handicapped people (diabetics) are worthwhile individuals.	Diabetic people have the same basic needs as people who are not diabetic. Diabetic people may have some difficulty coping with the misconceptions some people have about their handicap.

PROJECT: C.H.A.N.G.E.
4TH GRADE CURRICULUM
DIABETES

ACTIVITY:

1) Diabetes Vocabulary List
2) Diabetes Lecture

OBJECTIVE:

Students know the causes and treatment of diabetes mellitus.

MATERIALS:

1) Diabetes Vocabulary List
2) Lecture: Diabetes

PROCEDURE:

Have copies of the diabetes vocabulary list and the lecture run off, so that every student has a copy of each. Begin by familiarizing the pupils with the list of diabetic terms. Then read the lecture with them. Follow with a discussion period, using the following questions:

1) Which type of diabetes is the most severe?
2) What are some of the symptoms of diabetes?
3) At what ages is a person most likely to get diabetics?
4) What glands are not working properly in the diabetic? Where are they located?
5) What are the two types of insulin reactions? How are they treated?
6) What must a diabetic do every morning upon awakening?

7) What types of medication might a diabetic need? What other treatments besides medication must a diabetic follow?

PROJECT: C.H.A.N.G.E.
4TH GRADE CURRICULUM
LECTURE: DIABETES

Diabetes mellitus is a long term disease in which the Beta Cells in the pancreas, one gland in the endocrine system, do not work properly. The islands of Langerhans located in the pancreas produce the hormone insulin. Insulin goes into the blood stream and works to break down the sugar in the blood so the body can use it. When there is not enough insulin or none at all, the build-up of sugar in the blood becomes a very dangerous situation for the body. Unless it is controlled, the person can lapse into a coma and die. Fortunately scientists have found ways to keep this disease under control.

The most severe form of diabetes is the insulin-dependent diabetic. This form always occurs in children or teenagers, but can also occur in adults. It is most severe because in this form of diabetes, the body produces NO insulin at all. In less severe forms of diabetes, the body does produce SOME insulin.

People who get diabetes usually fall into certain categories. For instance people who have relatives with diabetes are more likely to get it. Usually it occurs in people over thirty. Women are more likely to get it than men. People who are overweight are also more likely to get diabetes.

Some of the symptoms of diabetes are: frequent urination, excessive thirst, extreme hunger, rapid weight loss or gain, drowsiness, tiring easily, general weakness, blurred vision, skin infections and boils. Another symptom is when sugar is found in the urine.

Once a person is found to have diabetes a variety of treatments are possible. Some mild forms of diabetes may be treated with diet and exercise alone. The diet consists of a controlled amount of carbohydrates, fats and proteins. It is a highly individual diet.

Usually a person with mild diabetes controls the disease with a balance of diet, exercise and oral medication. The oral medication is not insulin. It stimulates the pancreas to make its own insulin.

When a person is a more severe diabetic and the pancreas produces NO insulin, he or she needs insulin. Insulin must be injected into the body. It cannot be taken orally because the gastric juices in the stomach destroy insulin.

All diabetics regardless of whether they need insulin or oral medication must follow a controlled diet and have sufficient exercise.

Diabetics must also test their urine daily. This tells whether the level of the blood sugar is too low (with too much insulin) or too high (with too much sugar. This test consists of dipping a specially prepared strip of paper into the urine sample. The color of the paper is then compared to a color chart to determine the appropriate sugar level.

Sometimes a diabetic may require emergency treatment. This may happen if the person doesn't know he or she is a diabetic, if the person wasn't following his or her diet, if they didn't take their medication, if they are under severe emotional stress or become ill. The diabetic may experience one of two reactions. One is called an insulin reaction and the other a diabetic coma or acidosis.

A person experiencing an insulin reaction may exhibit the following symptoms: 1) Usually fast onset, 2) pale, moist skin, 3) excited behavior, 4) normal to shallow breathing, 5) hunger, and 6) slight or no sugar in the urine. The proper treatment for a person with an insulin reaction is for them to be given a measured amount of sugar by a proper medical authority or doctor. The cause of the insulin reaction may be due to too much insulin, too little food or over-exercise. It occurs most often among people who only take insulin or occasionally in those who take oral medication.

A person experiencing a diabetic coma or acidosis reaction may exhibit the following symptoms: 1) flushed dry skin, 2) drowsiness, 3) fruity odor on the breath, 4) deep labored breathing, 5) vomiting, 6) dry tongue, 7) thirst, and 8) a large amount of sugar in the urine. The person goes into this coma because the level or sugar is too high. This can happen when a person doesn't take their medication either oral or insulin; when they neglect their diet or over-exercise, or when they do not know they have the disease. The proper treatment for diabetic coma is immediate proper medical attention during which the person would receive the proper insulin injection.

Diabetes being a chronic or long term disease requires the proper treatment and control measures all the time. It is not an easy matter to face a lifetime of controlled diet, exercise and maybe daily shots. Diabetics need understanding and support from others. They have the same basic needs as others and sometimes have trouble coping with the misconceptions people have about their disease.

PROJECT: C.H.A.N.G.E.
4TH GRADE CURRICULUM
DIABETES

DIABETES VOCABULARY LIST

DIABETES MELLITUS- A long term disease in which the islands of Langerhans located in the pancreas do not produce enough insulin. Because of this condition the body cannot make use of starches, sugars and fats in the normal way.

JUVENILE DIABETES- A severe form of diabetes occuring in childhood or adolescence.

MATURITY ONSET DIABETES- A form of diabetes which occurs in the mature person.

SYMPTOMS OF DIABETES- Frequent urination, excessive thirst, extreme hunger, rapid weight loss or gain, drowsiness, tiring easily, general weakness, blurred vision, skin infections and boils.

PANCREAS- An organ located near the stomach containing the islands of Langerhans.

ISLANDS OF LANGERHANS- Cells scattered like islands throughout the pancreas that produce insulin.

DIET- Controlled amounts of carbohydrates, fats and proteins.

ORAL MEDICATION- Not insulin - Medicine to stimulate the pancreas to produce insulin.

INSULIN- A substance which is extracted from the pancreas of animals and is injected into the diabetic. Human beings also produce this substance.

EXERCISE- A controlled amount of this is necessary along with a proper diet.

URINE TEST- Diabetic dips a piece of specially treated paper into the urine and compares it to a color chart provided to determine the level of sugar in the urine.

INSULIN REACTION- Characterized by too little sugar in the blood. This usually occurs in the person who has had too little food or too much exercise.

DIABETIC COMA OR ACIDOSIS- Characterized by too much sugar in the blood. This usually occurs when the person has not taken their daily medication, is ill, has had a poor diet or too much exercise.

PROJECT: C.H.A.N.G.E.
4TH GRADE CURRICULUM
DIABETES

ACTIVITY:

Diabetes Matching Puzzle

OBJECTIVE:

To further reinforce the terms and definitions associated with diabetes.

MATERIALS:

Diabetes Matching Puzzle

PROCEDURE:

Allow the children to work the puzzle using the diabetic terms sheet. Allow time for correction and discussion of puzzles when they complete them.

ANSWER KEY: DIET, EXERCISE

D 6

PROJECT: C.H.A.N.G.E.
4TH GRADE CURRICULUM
DIABETES - MATCHING PUZZLE

NAME____

Match the letters on the right with the numbers on the left to find two things necessary to a diabetic.

______ 1. Diabetes Mellitus

______ 2. Juvenile Diabetes

______ 3. Maturity Onset Diabetes

______ 4. Pancreas

______ 5. Diet

______ 6. Oral medication

______ 7. Islands of Langerhans

______ 8. Insulin

______ 9. Acidosis

______ 10. Exercise

______ 11. Insulin reaction

______ 12 Urine test

I. An organ located near the stomach containing the islands of Langerhans.

E. Controlled amount of carbohydrates, fats and proteins.

I. A diabetic needs a controlled amount of this.

R. A substance extracted from the pancreas of animals and injected into the diabetic.

S. Occurs when there is too much insulin in the blood.

E. When a diabetic dips specially treated paper into the urine and checks it with a color chart to determine the amount of sugar in the blood.

D. A long term disease occuring when the body doesn't produce enough insulin.

E. A form of diabetes occuring in the mature person which is not usually as severe as juvenile diabetes.

X. Not insulin, but a medicine taken orally to stimulate the body to produce insulin.

I. A severe form of diabetes occuring in childhood or adolescence.

E. Cells scattered like islands throughout the pancreas that produce insulin.

C. Occurs when there is too much sugar in the urine.

PROJECT: C.H.A.N.G.E.
4TH GRADE CURRICULUM
DIABETES

ACTIVITY:

The students write a story about a person or child with diabetes.

OBJECTIVE:

Students can identify with persons having diabetes and the problems they encounter.

MATERIALS:

Paper, pen

PROCEDURE:

Tell the class to write a story about a person or a child with diabetes. Some suggestions that may be offered to them are:

1) a child having an insulin reaction
2) a child who is a diabetic who hates shots and must have insulin
3) how I would feel if I were a diabetic

PROJECT: C.H.A.N.G.E.
4TH GRADE CURRICULUM
DIABETES

ACTIVITY:

Role Playing

OBJECTIVE:

To provide the students with the opportunity to understand what it's like to be a diabetic and to review the symptoms of an insulin reaction or a persons symptoms when entering a diabetic coma.

MATERIALS:

Thinking caps

PROCEDURE:

1) Allow one student to play the part of a diabetic person going into insulin shock. Have this student role play the symptoms. Have another student tell what the correct medical attention should be.
2) Repeat the procedure having another student role play a diabetic going into a diabetic coma.

PROJECT: C.H.A.N.G.E.
4th GRADE CURRICULUM
DIABETES

ACTIVITY:

Pamphlet: "What Everyone Should Know About Diabetes."

OBJECTIVES:

Students know the symptoms, causes and treatment for diabetes.

MATERIALS:

1) Pamphlet: "What Everyone Should Know About Diabetes." (A Scriptographic Booklet by Channing L. Bete Co., Inc., 1975 edition)
2) What everyone should know about diabetes (Worksheet)

PROCEDURE:

Read the pamphlet with the students. After they have read the pamphlet, the students are to be given the worksheet on diabetes. After completion of the worksheet, correct and discuss the answers with the students.

PROJECT: C.H.A.N.G.E.
4TH GRADE CURRICULUM
DIABETES
WHAT EVERYONE SHOULD KNOW ABOUT DIABETES

NAME______________________________

1. How are food sugars used by the body?

   1.______________________________

   2.______________________________

   3.______________________________

   4.______________________________

2. What happens to the food sugars in a person with diabetes?

3. What are some of the theories scientists have on why people get diabetes?

   1.______________________________

   2.______________________________

   3.______________________________

   4.______________________________

4. What are the types of people most likely to get diabetes?

   1.______________________________

   2.______________________________

   3.______________________________

5. List the symptoms of diabetes.

6. What tests does a doctor use to find out if a person has diabetes?

   1.______________________________

   2.______________________________

   3.______________________________

7. What are two types of diabetes?

1. ______________________________

2. ______________________________

8. What are the usual treatments for diabetes?

1. ______________________________

2. ______________________________

3. ______________________________

4. ______________________________

9. What parts of the body may a person with diabetes inject insulin?

1. ______________________________

2. ______________________________

3. ______________________________

10. Name two types of reaction a diabetic may have.

1. ______________________________

2. ______________________________

11. What are signs of an insulin reaction?

1. ______________________________

2. ______________________________

3. ______________________________

4. ______________________________

5. ______________________________

6. ______________________________

7. ______________________________

8. ______________________________

9. ______________________________

10. ______________________________

12. What are the signs of an acidosis or diabetic coma reaction?

1. ______________________________
2. ______________________________
3. ______________________________
4. ______________________________
5. ______________________________
6. ______________________________
7. ______________________________
8. ______________________________
9. ______________________________
10. ______________________________

13. What kinds of complications might diabetes lead to?

1. ______________________________
2. ______________________________
3. ______________________________
4. ______________________________

PROJECT: C.H.A.N.G.E.
4TH GRADE CURRICULUM
DIABETES

Activity:

Book You Can't Catch Diabetes From a Friend

Objectives:

Students understand the special problems encountered by a child who has diabetes.

Materials:

Book, You Can't Catch Diabetes from a Friend by Lynne Kipnis and Susan Adler (Triad Scientific Publishers. Gainesville, Florida 1979.)

Procedure:

The teacher may wish to read the book to the class allowing for discussion and questions afterwards. The book may be assigned as supplementary reading for those students who wish to read more about the effects of diabetes. In this case, a book report may be assigned. The report should include the title, author and a brief summary. The report may be shared with the class.

PROJECT: C.H.A.N.G.E.
4TH GRADE CURRICULUM
DIABETES

Activity:

Book: The Sugar Disease: Diabetes by Dr. Alvin Silverstein and Virginia B. Silverstein.

Objectives:

Students know the causes, physical manifestations, and treatment of diabetes.

Materials:

Book: The Sugar Disease: Diabetes by Dr. Alvin Silverstein and Virginia B. Silverstein (J.B. Lippencott, New York 1980.)

Procedure:

The teacher may wish to read all or parts of the book to the class. If the teacher chooses to read only some parts of the book it is recommended to read "What is Diabetes? on p. 17, "What Goes Wrong? on p. 29, "Testing for Diabetes" on p. 59 and "How Diabetes is Treated" on p. 66.

The book may also be used as supplementary reading for students who wish to gain further knowledge about the disease. A report may be written which includes the title, author, and a brief summary. This report may be shared with the class.

PROJECT: C.H.A.N.G.E.
4TH GRADE CURRICULUM
DIABETES

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What Everyone Should Know About Diabetes. Channing L. Bete Co. Inc. 1975.

RIDGELAND PUBLIC SCHOOLS
DISTRICT 122
TITLE IV C - ESEA
PROJECT: C.H.A.N.G.E.
TEACHER MANUAL

CONCEPTS OF HANDICAPS AND ATTITUDES NEED GUIDANCE AND EDUCATION

INTERMEDIATE CURRICULUM

CURRICULUM COORDINATOR: KATHLEEN DELANEY

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DIRECTOR: DONALD W. MARTIN COORDINATOR: M. SHERRY SMITH

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OVERVIEW OF THE INTERMEDIATE PROGRAM

FORMAT OF TEACHERS MANUAL

The intermediate program is divided into three separate curricula. Each level is composed of five units. The fourth grade units are: Acceptance of Self and Others (Handicapped and Non-Handicapped), Physiology of the Eye, Blindness, Physiology of the Endocrine System and Diabetes. At fifth grade, the units are: Acceptance of Self and Others (Handicapped and Non-Handicapped), Physiology of the Ear, Deafness, Physiology of the Oral Mechanism and Speech Impairments. The conclusion of the intermediate program is the following sixth grade units: Acceptance of Self and Others (Handicapped and Non-Handicapped), Physiology of the Central Nervous System, Epilepsy, Basic Anatomy and Physical Handicaps. For convenience, the Manual is divided by grade levels. Teachers should view the complete curriculum but need only their specific grade level for instructional purposes.

Each unit at a specific grade level includes:

1. Introduction, objectives and concepts
2. Activities

and a 3. Bibliography.

The introduction provides the rationale and basis background information for the unit. The behavioral objectives state the desired student response/outcome for unit completion. Basic concepts are provided to further clarify each objective.

The Activities section is composed of a series of lesson plans. Each lesson plan includes:

1. Objectives - what the student should be able to do when the activity is completed
2. Materials - what is necessary to teach this lesson

and a 3. Procedure - specific suggestions on how to conduct the class activity or utilize films, filmstrips and books.

The Bibliography contains a brief synopsis of films, filmstrips and books which are appropriate for the unit.

SEQUENCE OF UNITS

Units are arranged in a predesignated order which best accomplishes the over-all goal of the program. The first unit at each level is Acceptance of Self and Others (Handicapped and Non-Handicapped). This unit precedes the study of specific disabilities based on the premise that in order to accept others one must first accept themselves.

In the Intermediate program, the normal functions of the body systems are studied prior to the deficiencies. An example, at the fourth grade level is the unit on the Physiology of the Eye and The Physiology of the Endocrine System which are studied in preparation for the disabilities units of Blindness and Diabetes. This portion of the program is related to the cognitive development of the students in the areas of handicaps.

At each grade level, topics were paired according to the cause-effect relationship of handicaps. For example, at the fourth grade curricula the units on Blindness and Diabetes are linked because of the correlation factor. Diabetes being the number one cause of blindness.

As one examines the fifth and sixth grade units reading through the introduction and concepts, one can see the correlation of the selected topics at each grade level.

The Intermediate program builds the necessary foundation of knowledge which culminates in the Junior High curriculum. For implementation of an effective and successful program,units should be taught in the order which they appear in the Manual.

TEACHING THE CURRICULUM

The program is designed for teachers to complete one activity per week with the students over a period of four months. Each unit covers a time span of three to five weeks. The teacher may choose a lesson plan described in the Activity section of the Manual or use/develop other materials which correlate with the objectives and concepts of the unit. The choice of materials and activities should be based on the objectives of the unit for each grade level and the individual needs of the class. Teachers should know the sequential development of the objectives at all grade levels when choosing Activities for a specific unit. In this way, a cohesive program is presented to the student.

The lesson plans include various types of activities. Among these are:

1. Ingenuity Exercises - Each unit begins with a puzzle or matching exercise which familiarizes the students with the terminology used in the unit.
2. Lectures - For some topics, prepared lectures have been chosen as the best form of presentation. The lectures are based on the concepts and objectives for the unit. Through this format, medical terminology has been reduced to an understandable level for teachers and students while maintaining the predesigned program criteria.
3. Simulation Activities - During these activities the students experience what it's actually like to be handicapped by using a method to simulate a handicapping condition. This might be achieved by activities such as trying to pour water into a cup or find the classroom door while blindfolded.

These activities help the students to understand the problems a handicapped person encounters in daily living. They also establish a basis for acceptance by fostering the development of empathy for the disabled person. All students should have an opportunity to participate in simulation experiences. They should be encouraged to think about and describe how it feels to be handicapped.

4. Filmstrips, movies, and books - Lesson plans using films filmstrips and books are included. These materials help the students to better understand handicapping conditions. They should be used with the specific objective at the grade level. After viewing the material, discussions should help students to achieve the objectives. The lesson plans contain specific directions for use of audio-visual material. These materials are one method for developing empathy.

5. Class discussion - Students should be encouraged to ask questions and talk about their feelings. It is important to accept all feelings - even negative ones. Rather than judge students' feelings, the teachers should help the students to discover why they have a particular feeling.

6. Guest Speakers - Probably the most important and enjoyable activity of the program is providing an opportunity for students to interact with handicapped people. This experience allows the student to perceive the handicapped person as an individual with feelings, needs, talents, and problems similar to themselves.

An especially exciting speaker to invite is a person who is blind and uses a guide dog. Speakers may be found by asking friends, or contacting local agencies such as: The Association for the Blind, Division of Vocational Rehabilitation, Easter Seal Society, United Cerebral Palsy, local hospitals, etc. Speaker discussion topics must be correlated with the objectives at each grade level. Personally meeting someone with a disability in a positive atmosphere is an important experience in developing acceptance and empathy towards handicapped people as worthwhile individuals.

PROGRAM IMPLEMENTATION

LEARNING CENTER INSTRUCTIONS

The material for all Activities at each level are housed in the Learning Center. Materials are stored in appropriately marked unit boxes according to grade levels. All materials which are necessary for the unit can be found in this box.

The teacher checks the unit material box out of the learning center by signing the sign out card located on the top of the unit box.

After each lesson the teacher should place the materials used back in the unit box. The unit material box should then be returned to the learning center so it is accessible to other teachers at this level.

USE OF THE TEACHERS MANUAL

As previously explained in the Overview, one lesson per week (of your choice) from the Activities section is to completed with the students. The unit material boxes contain all the necessary articles for the lesson plan.

Starting with the first unit at your level, select one activity. After teaching the activity turn to the Lesson Plan Checklist located at the end of the unit and write the title of the activity on the line next to the appropriate week. Rate the Activity using the code on the Lesson Plan Checklist.

At the conclusion of each unit select one Activity which has been taught and evaluate this lesson on the Unit Evaluation Form (which follows the Lesson Plan Checklist). A Unit Evaluation Form must be completed for each unit.

CALL IN SCHEDULE

The "Call In" schedule provides the dates when Teacher Manuals are turned into the school office. At this time, the Lesson Plan Checklist and Unit Evaluation Forms are reviewed and initialed by the Principal. Teachers Manuals are then returned promptly to the teachers for continued program implementation.

SPEAKERS LIST

A minimum of one guest speaker per grade level will be arranged by the Principal or a designee. After Speakers have been scheduled teachers will be notified of the date, time and location of the speaking engagement. Whenever possible, teachers will be allowed to sign up for the time of their choice.

Teachers will be notified of speaker cancellations as soon as possible.

ASSESSMENT INSTRUMENTS

A Skill Attainment Checklist has been designed for each level of the program. These instruments are designed to measure the students achievement in terms of grade level objectives and concepts.

Student instruments are given pre and post the intervening program. Both experimental and control students participate in the assessment instruments to determine the statistical level of significance the project has achieved.

Complete instructions for the instruments are packaged with the assessment materials.

READABILITY STUDY

Nancy Updegraff
Reading Consultant

In each of the work sheets the readability level varies from two years below the grade for which the sheet was designed, to a half year above the grade listed on the top of the sheet. Therefore, the majority of the students (with some assistance on terms) should be able to read the worksheets.

Much of the terminology is complicated and difficult to pronounce. It is not important for students to correctly pronounce terms in order to identify them or to read the material around them. If a term seems bothersome tell the student to call it blank or blank and match or read as needed. For word puzzles the student should be able to locate the word or tell it is on a cross word puzzle by process of elimination even though they may not be able to correctly pronounce it. Worksheets can be done orally, in a group or in partners.

ACCEPTANCE OF SELF & OTHERS

(HANDICAPPED AND NON-HANDICAPPED)

INTERMEDIATE LEVEL

PROJECT: C.H.A.N.G.E.
4TH GRADE CURRICULUM
INTRODUCTION: ACCEPTANCE OF SELF AND OTHERS

The first unit focuses on feelings and emotions. The emphasis is on helping students become better able to understand themselves and those around them. The main idea to be stressed is that feelings and emotions are not good or bad and that there are many choices available as to how they may be expressed.

The reason for studying this topic at the beginning relates to the goal for the whole program. Project C.H.A.N.G.E. hopes to help change attitudes towards people with handicaps. If the children are to grow in accepting people who are handicapped, they first must accept themselves.

The basic concepts and objectives which are taught in this unit are:

UNIT	OBJECTIVE	CONCEPT
Acceptance of Self & Others	The student can define emotions	Emotions are the feelings people have about other people, the surrounding world and themselves.
	The students understand all people experience feelings.	Some feelings are love, affection, pride, happiness, confidence, anger, fear, worry, sadness, boredom, etc.
	The students understand feelings or emotions are neither good nor bad.	All feelings are acceptable. There are many ways to express one's feelings. Feelings alone do not make things happen. The manner in which people express themselves causes consequences.
	The student recognizes an understanding of one's own feelings enables alternative selections for the expression of their feelings.	A person can express his feelings better if he understands them. Many things give us cues to our true feelings. Some cues are other people, inner knowledge and dreams. It is possible to have two conflicting feelings at one time. (e.g. anger and love).

PROJECT: C.H.A.N.G.E.
4TH GRADE CURRICULUM
ACCEPTANCE OF SELF AND OTHERS

ACTIVITY:

Word Search Puzzle.

OBJECTIVE:

Children become familiar with vocabulary used in discussions on emotions and feelings.

MATERIALS:

Work Sheet with Puzzle.

PROCEDURE:

Discuss with children what some of their feelings are.
Distribute Puzzle and allow them to complete it.

PROJECT: C.H.A.N.G.E.
4TH GRADE CURRICULUM
ACCEPTANCE OF SELF AND OTHERS
WORD SEARCH PUZZLE

A	X	L	O	V	E	T	V	P	R	S	W	Z	D
N	F	C	O	N	S	E	Q	U	E	N	C	E	S
G	O	F	E	E	L	I	N	G	S	A	D	N	E
E	O	W	E	O	R	R	Y	P	A	F	E	E	T
R	Z	T	E	C	O	N	F	I	D	E	N	C	E
O	L	T	M	A	T	W	O	E	Y	A	M	D	C
C	S	W	O	B	F	I	W	E	A	R	Y	E	T
L	S	O	T	O	G	B	O	O	R	E	D	O	M
M	E	N	I	R	N	G	R	N	N	Q	U	I	T
Y	N	G	O	E	W	O	R	R	Y	U	N	A	P
U	D	E	N	D	I	B	Y	O	E	E	D	O	M
Q	A	R	S	O	T	S	A	B	S	E	N	T	A
N	S	L	N	M	H	A	P	P	I	N	E	S	S
F	P	R	I	D	E	T	E	A	R	E	A	L	I

Word List:

Emotions	Happiness
Consequences	Confidence
Love	Anger
Affection	Fear
Pride	Worry
Sadness	Boredom

NAME: ______________________________

A- 2
KEY

PROJECT: C.H.A.N.G.E.
4TH GRADE CURRICULUM
ACCEPTANCE OF SELF AND OTHERS
WORD SEARCH PUZZLE

A	X	L	O	V	E	T	V	P	R	S	W	Z	D
N	F	C	O	N	S	E	Q	U	E	N	C	E	S
G	O	F	E	E	L	I	N	G	S	A	D	N	E
E	O	W	E	O	R	R	Y	P	A	F	E	E	T
R	Z	T	E	C	O	N	F	I	D	E	N	C	E
O	L	T	M	A	T	W	O	E	Y	A	M	D	C
C	S	W	O	B	F	I	W	E	A	R	Y	E	T
L	S	O	T	O	G	B	O	O	R	E	D	O	M
M	E	N	I	R	N	G	R	N	N	Q	U	I	T
Y	N	G	O	E	W	O	R	R	Y	U	N	A	P
U	D	E	N	D	I	B	Y	O	E	E	D	O	M
Q	A	R	S	O	T	S	A	B	S	E	N	T	A
N	S	L	N	M	H	A	P	P	I	N	E	S	S
F	P	R	I	D	E	T	E	A	R	E	A	L	I

Word List:

Emotions	Happiness
Consequences	Confidence
Love	Anger
Affection	Fear
Pride	Worry
Sadness	Boredom

NAME: ____________________________________

PROJECT: C.H.A.N.G.E.
4TH GRADE CURRICULUM
ACCEPTANCE OF SELF AND OTHERS

ACTIVITY:

Set of filmstrips and cassettes: Get In Touch With Your Emotions
Part3. "You Can Show Love and Affection"
Part4. "The Brighter Side of Life"

OBJECTIVE:

Students recognize that everyone needs love and affection, and that in order to get love and affection one needs to learn how to give it. It is possible for love and hate to get mixed up.

MATERIALS:

Filmstrips and Cassettes: Get In Touch With Your Emotions
Part 3. "You Can Show Love and Affection"
Part 4. "The Brighter Side of Life" (Kimbo Educational)

PROCEDURE:

Show the two filmstrips and follow the showing with a discussion using the following questions:

1. What is the nicest thing anyone ever said to you? What is the nicest thing you can think of to say to a friend?
2. Why is it sometimes embarrassing to say nice things to people?
3. Is trust necessary in a friendship? Why?
4. Why do we sometimes hate people who love us?
5. Why must a person like himself or herself before someone else can like them?
6. Why is it sometimes so difficult to show love and affection?
7. How can you love and hate someone at the same time?

Suggest that the students read the book, Good and Bad Feelings, by Mark L. Stein or What Makes Me Feel This Way, by Eda Le Shun. It is an excellent book on the topic of feelings and emotions.

PROJECT: C.H.A.N.G.E.
4TH GRADE CURRICULUM
ACCEPTANCE OF SELF AND OTHERS

ACTIVITY:

Set of Filmstrips and Cassettes: Get In Tough With Your Emotions
Part 1. "It's Natural To Be Angry Or Afraid"
Part 2. "Coping With or Copping Out"

OBJECTIVE:

Students recognize the importance of understanding their feelings of anger and fear and learn ways of coping with these emotions.

MATERIALS:

Filmstrips and Cassettes: Get In Touch With Your Emotions
"It's Natural to Be Angry or Afraid"
and "Coping With or Copping Out" (Kimbo Educational)

PROCEDURE:

After viewing the first filmstrip, discuss the material by asking the following questions:

1. Name some situations in which you became angry.
2. How did you react?
3. Could you have handled it differently?
4. What are some things that make you afraid?
5. What did you do?
6. How can you tell someone is afraid?
7. How do you usually react when you are afraid in the company of other people?

With the second filmstrip, set up the following role playing procedures:

1. Set up a situation in which two students are talking during class. A third student turns around to tell the other two students to be quiet, and that child consequently gets in trouble for talking.
2. Set up a situation in which three students are discussing a party they have been invited to, when a fourth child enters the conversation and discovers that he or she has not been invited.

Have these two situations played through having the students show several alternative ways the injured party could respond. Follow this with a discussion of which behavior seems the most appropriate way of handling the situation.

PROJECT: C.H.A.N.G.E.
4TH GRADE CURRICULUM
ACCEPTANCE OF SELF AND OTHERS
(HANDICAPPED AND NON-HANDICAPPED)

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"It's Natural to be Angry or Afraid". Getting in Touch With Your Emotions. Kimbo Educational Co., 1975.

Le Shun, Edna. What Makes Me Feel This Way. New York: Macmillan, 1972.

Stein, Mark L. Good and Bad Feelings. New York: Morrow, 1976.

"The Brighter Side of Life". Getting in Touch With Your Emotions. Kimbo Educational Co., 1975.

"You Can Show Love and Affection". Getting in Touch With Your Emotions. Kimbo Educational Co., 1975.

PHYSIOLOGY OF THE EYE

INTERMEDIATE LEVEL

PROJECT: C.H.A.N.G.E.
4TH GRADE CURRICULUM
INTRODUCTION: PHYSIOLOGY OF THE EYE

The main focus of PROJECT: C.H.A.N.G.E. is to help change the attitudes of the children towards people with handicaps. In fourth grade the handicaps to be studied are blindness and diabetes. It is felt that to clearly understand a handicap, a person must have a working knowledge of how that particular body part works normally. Thus, before we study blindness we shall study the normally functioning eye.

The basic objectives and concepts to be studied in this unit are:

UNIT	OBJECTIVE	CONCEPT
Physiology of the eye	The student can identify the parts of the eye	The cornea, pupil, iris, lens, vitrious humor, optic disk, retina, (with it's rods and cones) and optic nerve are parts of the eye.
	The student can explain the function of each part of the eye	Light travels through the cornea, into an opening which can adjust to strong or weak light called the pupil. This is surrounded by the colored part of the eye - the iris. The light then travels through the lens which flattens or thickens to focus the image properly on the retina. The light rays then pass through the vitrious humor and focus on the retina, which contains rods and cones which are cells that change the light energy to nerve impulses. These nerve impulses are sent along the optic nerve to the brain.
	The student can define normal vision	Normal vision is often described as 20/20 vision. This means a person can see from a distance of 20 feet what a normal eye can see from that distance. Usually determined by having the subject read letters of various sizes at a distance from the test chart. The result is expressed as a fraction: 20/20

PROJECT: C.H.A.N.G.E.
4TH GRADE CURRICULUM
PHYSIOLOGY OF THE EYE

ACTIVITY:

1) Chart #6 from "The Human Body: Systems for Sensing and Moving"
2) Crossword Puzzle

OBJECTIVE:

Children become familiar with vocabulary used in learning about the physiology of the eye.

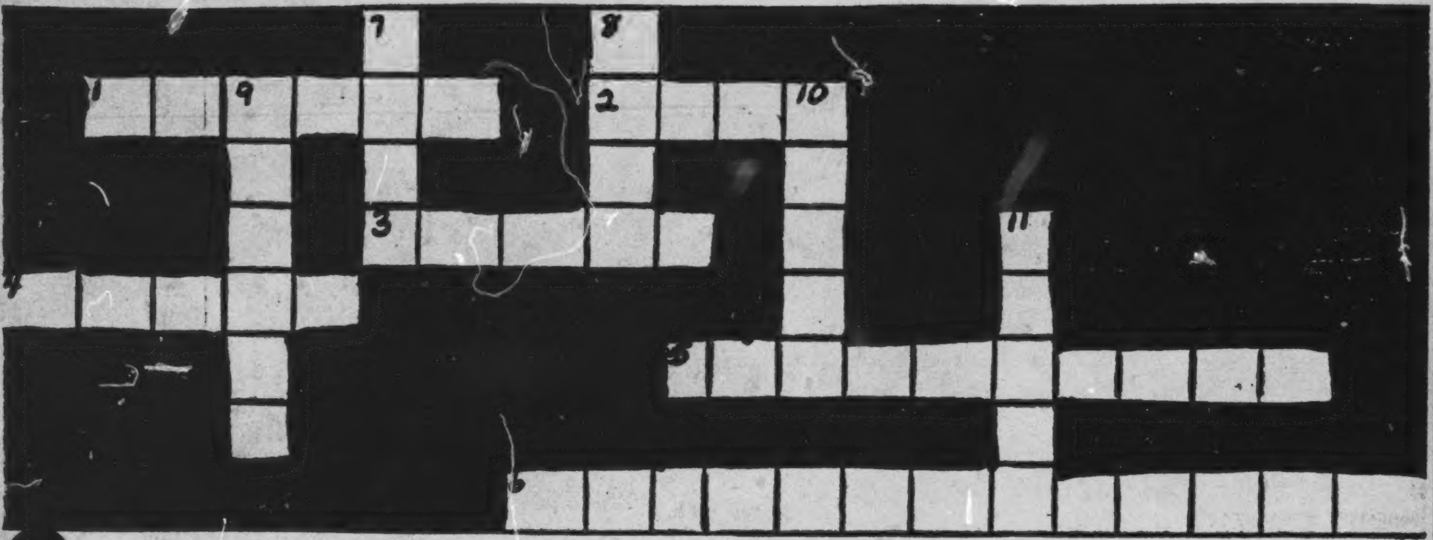
MATERIALS:

1) Chart #6 from "The Human Body: Systems for Sensing and Moving"

PROCEDURE:

Hold up the chart and point out to the class the various eye parts and their function. Eye parts should be listed on the board. The crossword puzzle should be done as a follow up.

PROJECT: C.H.A.N.G.E.
4TH GRADE CURRICULUM
PHYSIOLOGY OF THE EYE

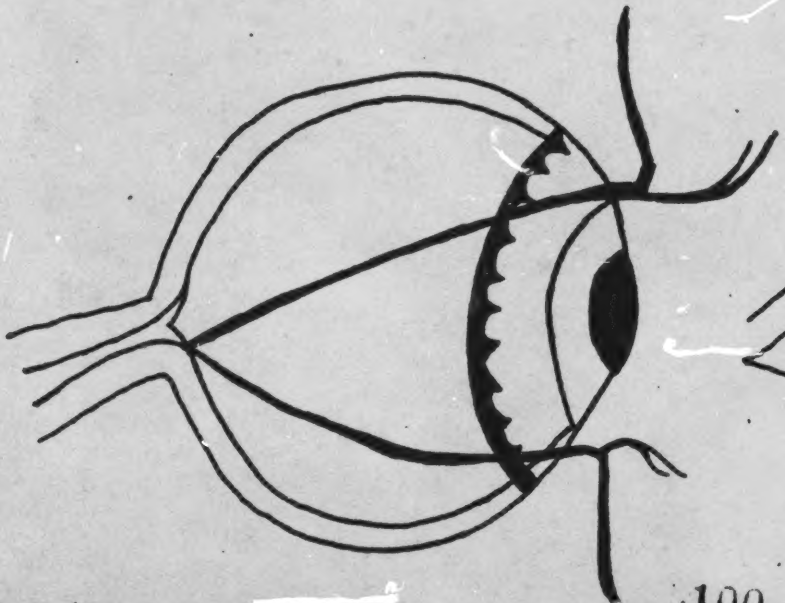


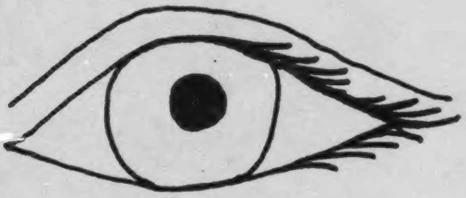
Across:

1. Window-like covering for the eye
2. Stick shaped cell found in the retina
3. We have five of these
4. Hole which light passes through
5. This carries what we see to the brain
6. Jelly-like substance which fills the eye ball behind the lens

Down:

7. Clear tissue which focuses what we see onto the retina.
8. Colored part of our eye
9. Innermost layer of the eye ball upon which the image is focused.
10. One of our five senses
11. Cone shaped cell located in retina





E-2
KEY

PROJECT: C.H.A.N.G.E.
4TH GRADE CURRICULUM
PHYSIOLOGY OF THE EYE
CROSSWORD PUZZLE - ANSWER SHEET

Across:

1. Cornea
2. Rods
3. Senses
4. Pupil
5. Optic Nerve
6. Vitreous Humor

Down:

7. Lens
8. Iris
9. Retina
10. Sight
11. Cones

PROJECT: C.H.A.N.G.E.
4TH GRADE CURRICULUM
PHYSIOLOGY OF THE EYE

ACTIVITY:

Filmstrip "You and Your Eyes"

OBJECTIVE:

Students become familiar with the parts of the eye and how they function.

MATERIALS:

Filmstrip and Cassette "You and Your Eyes", from the series *You and Your Health*, Walt Disney Educational Media Company

PROCEDURE:

After viewing the filmstrip, discuss the information by seeing if the children can trace the path of light to the brain. Children should name each part of the eye which light passes.

PROJECT: C.H.A.N.G.E.
4TH GRADE CURRICULUM
PHYSIOLOGY OF THE EYE

ACTIVITY:

Diagram of the eye

OBJECTIVE:

Students are able to name the parts of the eye and recognize the location of each part.

MATERIALS:

1) Overheads of diagram of the eye, 2) xeroxed copies of diagram for each child.

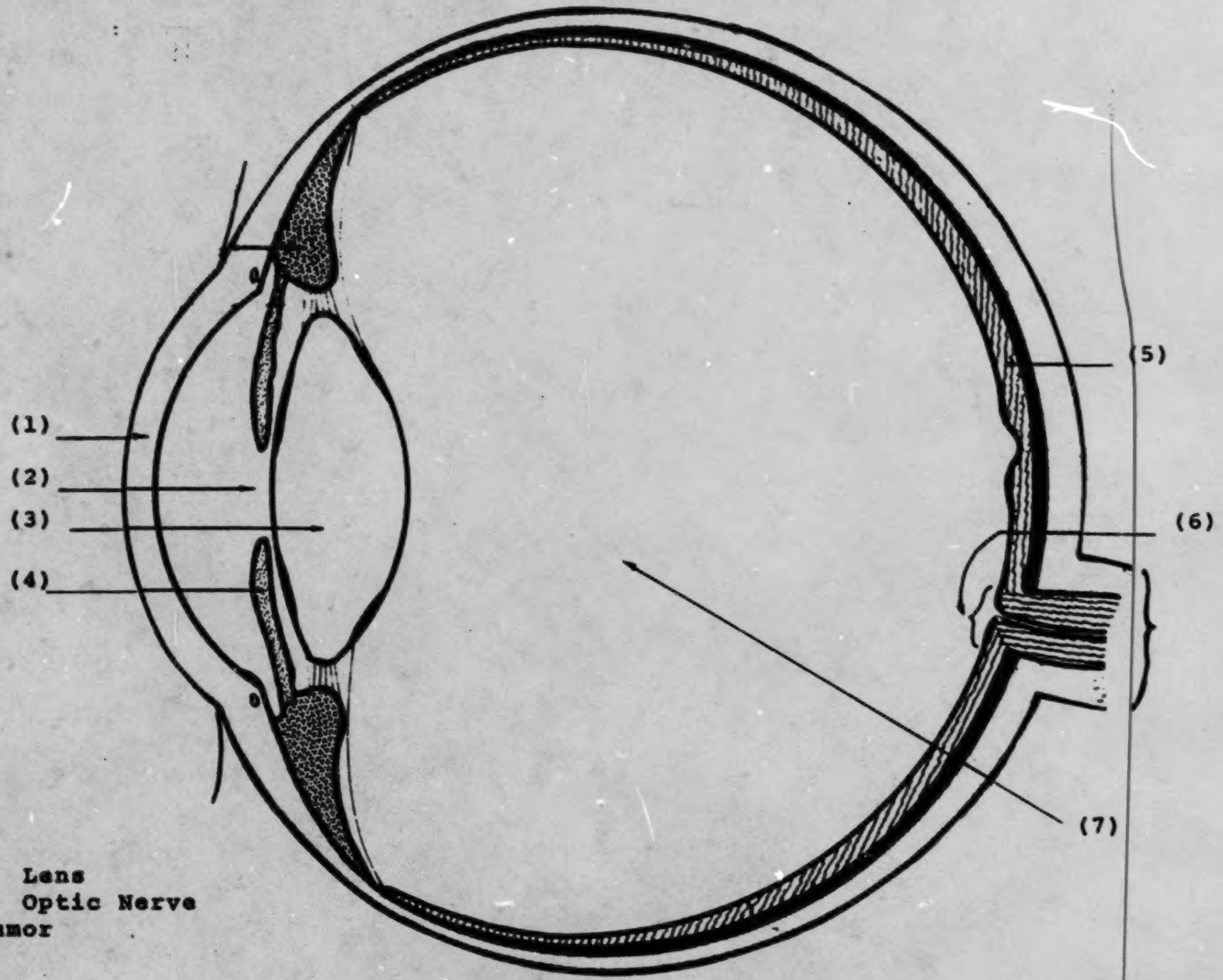
PROCEDURE:

Using overhead projector and the overhead of the eye diagram discuss the parts of the eye with the class. Then pass out copies of the diagram and allow class to label the parts of the eye.

ANSWER KEY TO THE DIAGRAM OF THE EYE:

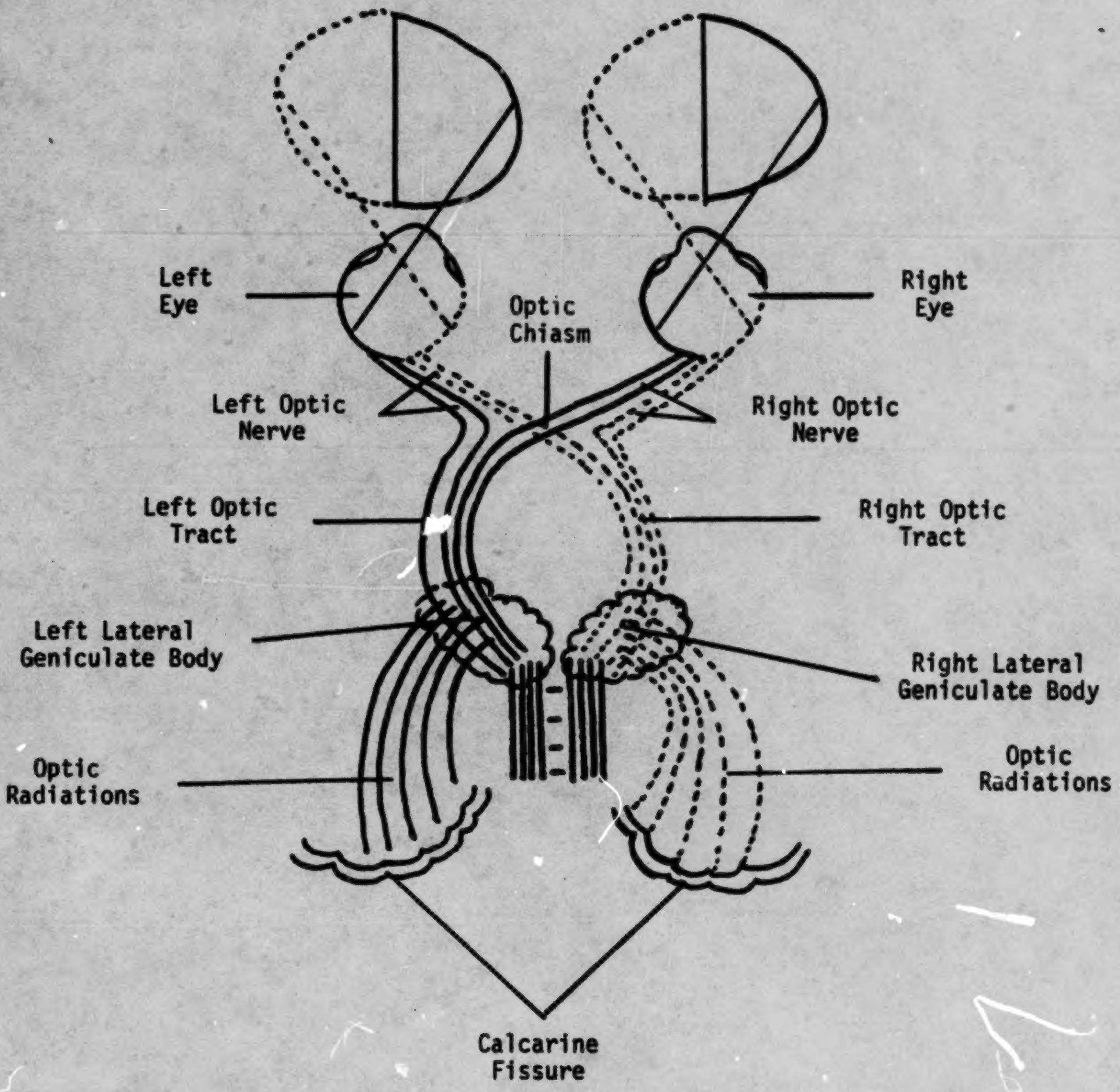
1) cornea
2) pupil
3) lens
4) iris
5) retina
6) optic nerve
7) vitreous humor

HORIZONTAL SECTION OF A RIGHT EYEBALL



Iris	Lens
Retina	Optic Nerve
Vitreous Humor	
Cornea	
Pupil	

Diagram 1.


Left Eye
Right Eye
Optic Chiasm
Left Optic Nerve
Right Optic Nerve
Left Optic Tract
Right Optic Tract
Left Lateral Geniculate Body
Right Lateral Geniculate Body
Optic Radiations
Optic Radiations
Calcarine Fissure

VISUAL PATHWAYS TO THE BRAIN

Diagram 2.

[112]

PROJECT: C.H.A.N.G.E.
4TH GRADE CURRICULUM
PHYSIOLOGY OF THE EYE

BIBLIOGRAPHY

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"You and Your Eyes". You and Your Health. Walt Disney, 1977.

BLINDNESS

INTERMEDIATE LEVEL

PROJECT: C.H.A.N.G.E.
4TH GRADE CURRICULUM
INTRODUCTION: BLINDNESS

In this unit, the topic of blindness is studied. The students will learn about the causes of blindness; the special aids and coping mechanism used by the blind, and the problems the blind person has in getting along in a sighted society.

By studying about blindness, the student will become sensitive to the needs of blind people and realize they share much in common with blind persons.

The objectives and concepts taught in this unit are:

UNIT	OBJECTIVE	CONCEPT
Disability: Blindness	The student can define blindness	Blindness is the partial or total loss of the ability to see. A person is considered to be legally blind whose central visual acuity is 20/200 or less in the better eye with glasses. 20/200 means that a person can see from a distance of 20 feet what a normal eye should see at a distance of 400 feet.
	The student can list the types of blindness	A person who is blind from birth is congenitally blind. A person who lost his or her sight thru injury, accident or disease has acquired blindness. There are four principal kinds of blindness in terms of how much can be seen. A. Total blindness - the person cannot tell light from dark. B. Economic blindness - the person cannot see well enough to make a living in any way that requires the use of his eyes. C. Vocational blindness - the loss of sight that prevents a person from continuing to earn a living in the same kind of work he has been doing. D. Educational blindness - the loss of ability to see that interferes with a person's ability to get an education by the methods that are commonly used in school.

UNIT	OBJECTIVE	CONCEPT
Blindness (cont.)	The student can state some causes of blindness	Blindness can be caused by an injury to the unborn child. Diseases: A. Trachoma is an infection which begins in the lining of the eyelid and spreads to the outside of the eye and produces small ulcers on the cornea and the eyelid. B. Ophthalmia neonatorum is a disease affecting newborn babies which causes ulcers to form on the eyelid, swollen eyelids and a large discharge of pus. It is controlled today by dropping silver nitrate into the eyes of newborn babies. C. Iritis is a disease affecting the iris and possibly the muscles controlling the lens. This disease is characterized by pain in the eye or forehead or temple followed by eyeball shrinkage and blindness, if not treated. D. Sympathetic Ophthalma is a disease in which the healthy eye begins to lose sight after the other eye is injured. Sometimes doctors will remove the injured eye to prevent this from occuring. E. Glaucoma is a disease in which the pressure within the eye is increased and causes damage to the optic nerve and may cause blindness. F. Cataracts is a disease cutting off the light that passes through the lens of the eye resulting from age, heredity or injury. G. Retinitis is an inflammation of the retina which could cause damage to the optic nerve. H. Conjunctivitis is the inflammation of the lining of the eyelid. It can be caused by dust or an infection. It is usually mild and can be cured. However, if left untreated, can cause blindness. I. Retinoplathy is a disorder of the retina of the eye. This may be caused by the disease diabetes mellitus. J. Ambliopia is a weakness in the eye caused by overuse of tobacco and alcohol. Symptoms include a cloud appearing before the eye and the person experiences difficulty distinguishing colors.

Unit	Objective	Concept
Blindness (Cont.)	The student can identify areas of difficulty, special needs, and ways of coping with the disability of blindness.	There are several areas of difficulty to be dealt with by a blind person: A. Mobility is difficult due to: 1. Stairs 2. New surroundings 3. Transportation 4. Traffic 5. Elevators 6. Ramps 7. Escalators 8. Weather B. Education is difficult due to the inability to read printed material (regular type) C. Basic self-reliance skills are hard to acquire. Some of these skills are: 1. Eating 2. Personal hygiene 3. Family care 4. Dressing 5. Shopping 6. Food preparation 7. Handling finances 8. Clothes selection D. Certain hazards are more life-threatening to blind people such as: 1. Fire 2. Natural disasters 3. Unexpected obstacles E. There are limitations on employment choices for blind people. F. There are limitations socially and recreationally for the blind person (movies, T.V. dancing, sports).

Unit	Objective	Concept
Blindness (Cont.)	The student can identify areas of difficulty, special needs, and ways of coping with the disability of blindness (cont.)	The blind person can learn to use special techniques and devices to deal with various situations. Some of these are: 1. Guide dogs 2. Development of all other senses to a higher degree than usual. 3. Canes 4. Special watches 5. Braille typewriter 6. Tapes 7. Styllus 8. Placement of food according to clock 9. Special glasses or lenses for partially sighted 10. Modification of home environment 11. Proper assistance by other people 12. Optagon 13. Special computerized devices
	The student recognizes that handicapped people (blind) are worthwhile individuals.	Blind people have the same basic needs as people who are sighted. Blind people may have difficulty coping with the misconceptions some people have about their handicap.

PROJECT: C.H.A.N.G.E.
4TH GRADE CURRICULUM
BLINDNESS

ACTIVITY:

Blindness Definition Sheet

OBJECTIVE:

The children become familiar with the terminology used in the study of blindness.

MATERIALS:

Blindness definition sheet

PROCEDURE:

Read over the Blindness definition sheet with the class stopping to clarify any difficulties the class may have understanding the definitions. Have the children keep the Blindness Definition Sheet on hand as it is necessary for the implementation of the next two activities.

PROJECT: C.H.A.N.G.E.
4TH GRADE CURRICULUM
BLINDNESS
DEFINITION SHEET

These are important words for you to know in order to understand blindness.

KINDS OF BLINDNESS:

Congenitally blind - a person who is blind from birth

acquired blindness - a person who lost his or her sight through accident, injury or disease.

total blindness - a person cannot tell light from dark.

economic blindness - a person cannot see well enough to make a living in any way that requires sight.

vocational blindness - the loss of sight that prevents a person from continuing to earn a living in the same kind of work he has been doing.

educational blindness - the loss of ability to see that interferes with a persons ability to get an education by the methods that are commonly used in school.

DISEASES CAUSING BLINDNESS:

trachoma - an infection which produces small ulcers on the cornea and the eyelid.

ophthalmia neontatorum - a disease affecting newborn babies, controlled with silver nitrate drops.

Iritis - a disease affecting the iris and possibly the muscles controlling the lens followed by eyeball shrinkage and blindness when not treated.

Sympathetic Ophthalma - a disease in which the healthy eye begins to lose sight after the other eye is injured.

Glaucoma - a disease in which the pressure within the eye is increased and causes damage to the optic nerve and and may cause blindness.

Cataracts - a disease cutting off the light that passes through the lens of the eye resulting from age, heredity or injury.

Retinitis - an inflammation of the retina which could cause damage to the optic nerve.

Conjunctivitis - an inflammation of the lining of the eyelid. It can be caused by dust or an infection. It is usually mild and can be cured, but if left untreated can cause blindness.

Retinoplathy - a disorder of the retina of the eye. This may be caused by diabetes mellitus.

Ambliopia - a weakness of the eye caused by overuse of tobacco and alcohol. Symptoms include a cloud appearing before the eye and the person experiences difficulty, distinguishing colors.

DIFFICULTIES DEALT WITH BY BLIND PERSONS:

1. **Mobility** - ability to move about. This may be hampered by:
    1. Stairs
    2. New surroundings
    3. Transportation
    4. Traffic
    5. Elevators
    6. Ramps
    7. Escalators
    8. Weather
2. **Education** - difficulty due to inability to read language
3. **Basic Self - reliance skills** - ability to do things by ones self. These skills are:
    1. Eating
    2. Personal hygiene (keeping clean)
    3. Family care
    4. Dressing
    5. Shopping
    6. Food preparation
    7. Handling finances (money)
    8. Clothes selection
4. **Hazards - dangers**
    1. Fire
    2. Natural disasters eg. earthquakes
    3. Unexpected obstacles
    4. Difficulties obtaining a job
    5. Social and recreational Difficulties

AIDES AND DEVICES FOR THE BLIND:

1. Guide dogs
2. Development of all other senses to a higher degree than usual.
3. Canes
4. Special watches

5. Braille typewriter
6. Tapes
7. Styllus - (a stick like instrument used in writing braille
8. Placement of food according to the clock
9. Special glasses or lenses for the partially sighted
10. Modification of home environment
11. Proper assistance by other people
12. Optagon - (a machine for making print larger)
13. Special computerized devices.

PROJECT: C.H.A.N.G.E.
4TH GRADE CURRICULUM
BLINDNESS

ACTIVITY:

Game using Blindness
Definition Sheet

OBJECTIVE:

The children will recognize the terminology and words used in the study of blindness.

PROCEDURE:

1) choose one child to keep score. 2) Divide the class into two teams. 3) Cut out the definitions from only one of the Blindness definition sheets. 4) Fold each definition twice and place in a wide mouthed container. 5) Choose one child from either team to come up and pick one of the definitions and read it to the class. 6) Allow a member of the opposing team to guess the correct meaning first. 7) If that child misses the other team gets to try and so on until the correct meaning is given. 8) The team which gives the correct answer receives a point which is recorded on the board by the score keeper. The game may end when all the definitions have been used once or play may continue until the teacher decides to end it. After the definitions have all been used they can be refolded and returned to the container to be reused.

PROJECT: C.H.A.N.G.E.
4TH GRADE CURRICULUM
BLINDNESS

ACTIVITY:

Blindness Vocabulary Puzzle

OBJECTIVE:

The children will become familiar with the terminology of the blindness unit.

MATERIALS:

Blindness Vocabulary Puzzle
Blindness Definition Sheet

PROCEDURE:

1. Duplicate a copy of the puzzle for each member of the class
2. Follow the directions on the puzzle
3. Children are allowed to use the Blindness Definition sheet when completing the puzzle.
4. The puzzle may also be used as an evaluation tool to measure performance on the Blindness Definition Sheet.

ANSWER KEY FOR BLINDNESS VOCABULARY PUZZLE:

BLINDNESS VOCABULARY

PROJECT: C.H.A.N. GE.
4TH GRADE CURRICULUM
BLINDNESS VOCABULARY PUZZLE

NAME ____

Match the meanings on the right side with the words on the left side to find the secret word.

_____	1. Congenitally Blind	E.	Person who became blind through accident, injury or disease.
_____	2. Ophthalmia Neontorum	U.	A disease which produces small ulcers on the cornea and eyelid.
_____	3. Economic blindness	B.	Person who is blind from birth.
_____	4. Glaucoma	L.	A disease in which the lining of the eyelid becomes inflamed.
_____	5, Stylus	R.	A disease causing the inflammation of the retina.
_____	6. Ambliopia	D.	Stick-like instrument used in writing Braille.
_____	7. Acquired blindness	N.	A disease caused by the overuse of tobacco and alcohol.
_____	8. Braille	V.	A disease cutting off light that passes through the lens usually affecting older persons.
_____	9. Educational Blindness	I.	Person cannot do any job requiring the use of his or her eyes.
_____	10. Cataracts	Y.	One of the difficulties faced by blind persons.
_____	11. Vocational blindness	C.	A disease affecting the iris and possible the muscles controlling the lens.
_____	12. Iritis	A.	Machine for making print larger.
_____	13. Optagon	B.	A disease which affects the retina which may be caused by diabetes.
_____	14. Retinoplathy	A.	Fire, natural disasters, unexpected obstacles are these for blind persons.

PROJECT: C.H.A.N.G.E.
4TH GRADE CURRICULUM
BLINDNESS VOCABULARY PUZZLE - 2

____ 15. Trachoma

____ 16. Conjunctivitis

____ 17. Hazards

____ 18. Retinitis

____ 19. Mobility

S. A person cannot get an education by methods used in ordinary schools.

S. System of raised dots which can be read by touch.

L. A disease affecting newborn babies controlled today by silver nitrate drops.

N. A disease in which the pressure within the eye is increased causing damage to the optic nerve.

O. A person can no longer work at a job he has been doing.

PROJECT: C.H.A.N.G.E.
4TH GRADE CURRICULUM
BLINDNESS

ACTIVITY:

Blind Wordgram

OBJECTIVE:

To enable the students to become familiar with some of the famous people and terminology associated with blindness.

MATERIALS:

Puzzle "BLIND WORDGRAM".

PROCEDURE:

Have the students circle the words at the bottom of the list as they find them in the puzzle. As an extra assignment for interested pupils, research may be done to learn about the people and the terms listed. These reports may be shared with the class.

B	C	O	E	M	R	T	Y	D	L	E	H	E	S	N
I	A	R	B	L	I	S	C	A	N	E	A	N	N	A
T	R	B	E	B	A	B	U	O	L	S	C	A	D	V
E	T	Y	E	O	G	O	D	E	D	I	U	G	S	I
N	A	B	P	L	I	E	N	S	O	Y	E	P	O	L
E	S	U	B	T	Y	K	A	M	C	B	S	Y	L	L
B	S	Y	A	D	E	L	L	I	A	R	B	I	E	U
I	E	I	L	L	U	S	R	A	D	T	L	M	O	S
L	N	B	L	O	U	I	S	B	R	A	I	L	L	E
N	K	E	B	A	E	H	B	D	A	E	N	A	O	N
B	R	A	I	L	L	E	R	U	D	T	D	B	E	N
E	A	C	L	B	O	L	E	N	G	I	O	T	Y	A
E	D	O	G	T	Y	E	Y	R	E	N	K	E	E	P

BLIND WORDGRAM

BLIND
DARKNESS
CANE
GUIDE DOG
BRAILLE
HELEN KELLER
LOUIS BRAILLE
EYES
BRAILLER
BEEP BALL
ANNE SULLIVAN

B C O E M R T Y D L E H E S N
I A R B L I S C A N E A N N A
T R B E B A B U O L S G A D V
E T Y E O G O D E D I U G S I
N A B P L I E N S O Y E P O L
E S U B T Y K A M C B S Y L L
B S Y A D E L L I A R B I E U
I E I L L U S R A D T L M O S
L N B L O U I S B R A I L L E
N K E B A E H B D A E N A O N
B R A I L L E R U D T D B E N
E A C L B O L E N G I O T Y A
E D O G T Y E Y R E N K E E B

BLIND WORDGRAM

BLIND
DARKNESS
CANE
GUIDE DOG
BRAILLE
HELEN KELLER
LOUIS BRAILLE
EYES
BRAILLER
BEEP BALL
ANNE SULLIVAN

PROJECT: C.H.A.N.G.E.
4TH GRADE CURRICULUM
BLINDNESS

ACTIVITY:

Film "HAROLD"

OBJECTIVE:

Students become aware of the special coping problems of the blind.

MATERIALS:

Film " HAROLD" and Film Guide (Encyclopedia Britannica Educational Corporation).

PROCEDURE:

After viewing the film, ask the class questions about blindness from the guide (answers provided - No. 2 Film Guide). When the class has finished answering these questions, continue the discussion by asking them the following questions:

1. How did you feel while watching the film?
2. How did you feel toward Harold?
3. Have you ever known anyone who was blind? How did you feel about that person? In what ways was he or she like Harold?
4. Consider the non-verbal cues we all give when speaking to others. How would not being able to give those cues affect conversation with Harold?
5. How was Harold's life different from yours?
6. How do you think Harold feels about himself?

PROJECT: C.H.A.N.G.E.
4TH GRADE CURRICULUM
BLINDNESS

ACTIVITY:

Filmstrip "LAURA".

OBJECTIVE:

The students will understand the special problems faced by a blind person.

MATERIALS:

Filmstrip and cassette "LAURA" (Pomfert House)

PROCEDURE:

After viewing the filmstrip, ask the following questions for diccussion.

1. What devices did you see Laura use to help her learn?
2. What devices did she use to help her get around?
3. What other problem did she have besides her blindness?
4. What caused her blindness?
5. Was her blindness acquired or congenital?
6. What problems did she experience with her sighted classmates?

PROJECT: C.H.A.N.G.E.
4TH GRADE CURRICULUM
BLINDNESS

ACTIVITY:

Filmstrip "FEELINGS SAY IT ALL"

OBJECTIVE:

Students are aware of the coping problems of a blind student in a regular classroom.

MATERIALS:

Filmstrip and cassette "FEELINGS SAY IT ALL" (Paramount Communications.)

PROCEDURE:

After viewing the filmstrip, discuss the following questions:

1. What did Eric need to learn first when he came to the new school?
2. Could Eric hear better than other children?
3. How should children help a blind student get around?
4. What were Eric's books like?
5. What contributions did Eric make to the class?
6. Should the children help Eric all the time?
7. How does Eric write out his homework?
8. How did the children change their attitudes towards Eric?

PROJECT: C.H.A.N.G.E.
4TH GRADE CURRICULUM
BLINDNESS

ACTIVITY:

Filmstrip "VISUAL IMPAIRMENT."

OBJECTIVE:

Students are aware of the problems caused by blindness in everyday life.

MATERIALS:

Filmstrip and cassette "VISUAL IMPAIRMENT" (Stanfield Associates)

PROCEDURE:

After viewing the filmstrip, discuss the film using the following questions:

1. What does 20/20 vision mean?
2. What does a person who sees 20/200 see?
3. What is the definition of blindness?
4. Can blind people see anything?
5. Does the girl in the film have congenital blindness or acquired blindness?
6. What aids does she use?
7. Many visually handicapped people can see differently. Name some of the visual problems some visually handicapped have?
8. What is learning to get around called?
9. What are some devices visually handicapped people may use to read?
10. How does Tony want to be treated?
11. What is the proper way to lead a blind person?

PROJECT: C.H.A.N.G.E.
4TH GRADE CURRICULUM
BLINDNESS

ACTIVITY:

Signature Card and Writing Board.
"Tell by Touch" Game.
Stylus and punch cards.
Braille Alphabet.

OBJECTIVE:

The students understand the techniques developed to compensate for the loss of sight and gain insight into what it's actually like to be blind.

MATERIALS:

1. Signature card and writing board (lined cardboard).
2. The "Tell by Touch" Game.
3. Stylus and punch cards.
4. Braille Alphabet
5. Two blindfolds.

PROCEDURE:

Arrange the class in three groups. Explain the use of each item. Allow each group about fifteen minutes for each project. Then switch games until every group has had a chance to play with each.

Group 1. Practice writing with the signature card and writing board blindfolded.

Group 2. Practice putting pieces into Tell by Touch game blindfolded.

Group 3. Practice using stylus and punch cards with the Braille Alphabet Card.

PROJECT: C.H.A.N.G.E.
4TH GRADE CURRICULUM
BLINDNESS

ACTIVITY:

Read the books: "SOUND OF SUNSHINE and CONNIES NEW EYES".

OBJECTIVE:

This is to provide further research and understanding of blindness and is meant for those students whose interest carries them further than the rest of the class.

MATERIALS:

SOUND OF SUNSHINE by Florence Parry Heide (Parents Magazine Press)
CONNIES NEW EYES by Bernard Wolf (J.M. Lippincott Co.)

PROCEDURE:

Children read the books and write down in a report the title, author, and a brief summary of the book. These reports may be shared with the class.

PROJECT: C.H.A.N.G.E.
4TH GRADE CURRICULUM
BLINDNESS

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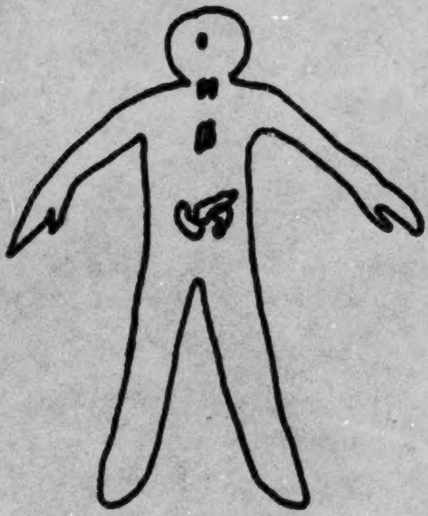
PHYSIOLOGY OF THE ENDOCRINE SYSTEM



INTERMEDIATE LEVEL

PROJECT: C.H.A.N.G.E.
4TH GRADE CURRICULUM
INTRODUCTION: PHYSIOLOGY OF THE ENDOCRINE SYSTEM

The purpose of studying the Endocrine System is to prepare the students for the study of diabetes, which will be covered in the next unit. In this unit, the students explore the various glands in the Endocrine System and learn their functions. Special emphasis should be placed on the pancreas, and the islets of Langerhans since their malfunctioning causes diabetes.

The objectives and concepts to be studied in this unit are:

UNIT	OBJECTIVE	CONCEPT
Physiology of the Endocrine System	The student can understand the basic functions of the endocrine system	The endocrine system consists of a group of ten ductless glands which secrete hormones which pass directly into the blood stream where they act to control and integrate various bodily activities.
	The student can identify and locate some of the glands which control growth, metabolism, and other bodily activities.	The pituitary or master gland controls other endocrine glands and controls the growth of the whole body. It is located at the base of the brain. The thyroid gland, located alongside the windpipe in the neck controls the rate at which the body uses food and oxygen. There are two adrenal glands, one above each kidney. In times of danger, these glands secrete a hormone which enables a person to react quickly in times of fright and anger. The pancreas which is located just behind the stomach contains groups of beta cells of the islets of Langerhans. One of the hormones produced by these cells is insulin. Insulin is essential for the proper metabolism of blood sugar (glucose) and for maintenance of proper sugar level in the blood.

PROJECT: C.H.A.N.G.E.
4TH GRADE CURRICULUM
ENDOCRINE SYSTEM

ACTIVITY:

Chart #8 on the Endocrine System.

OBJECTIVE:

Students become familiar with the function and location of each of the endocrine glands,

MATERIALS:

Endocrine System Chart from "The Human Body Systems for Sensing and Moving" (E.B.E.C.)

PROCEDURE:

Hold up chart and guide children to locate each endocrine glands. Function of each gland may be read from the back as each gland is pointed out by the teacher. Children may be encouraged to reproduce the chart putting in and labelling each gland. Special emphasis should be given to the pancreas since diabetes will be studied next.

PROJECT: C.H.A.N.G.E.
4TH GRADE CURRICULUM
PHYSIOLOGY OF THE ENDOCRINE SYSTEM

ACTIVITY:

Endocrine System Crossword Puzzle.

OBJECTIVE:

The students learn the vocabulary used in discussing the Endocrine System.

MATERIALS:

Endocrine Crossword Puzzle

PROCEDURE:

Have the students find the words which go into the puzzle. Allow them to complete the puzzle and discuss the finished results.

ANSWER KEY FOR ENDOCRINE SYSTEM CORSSWORD PUZZLE:

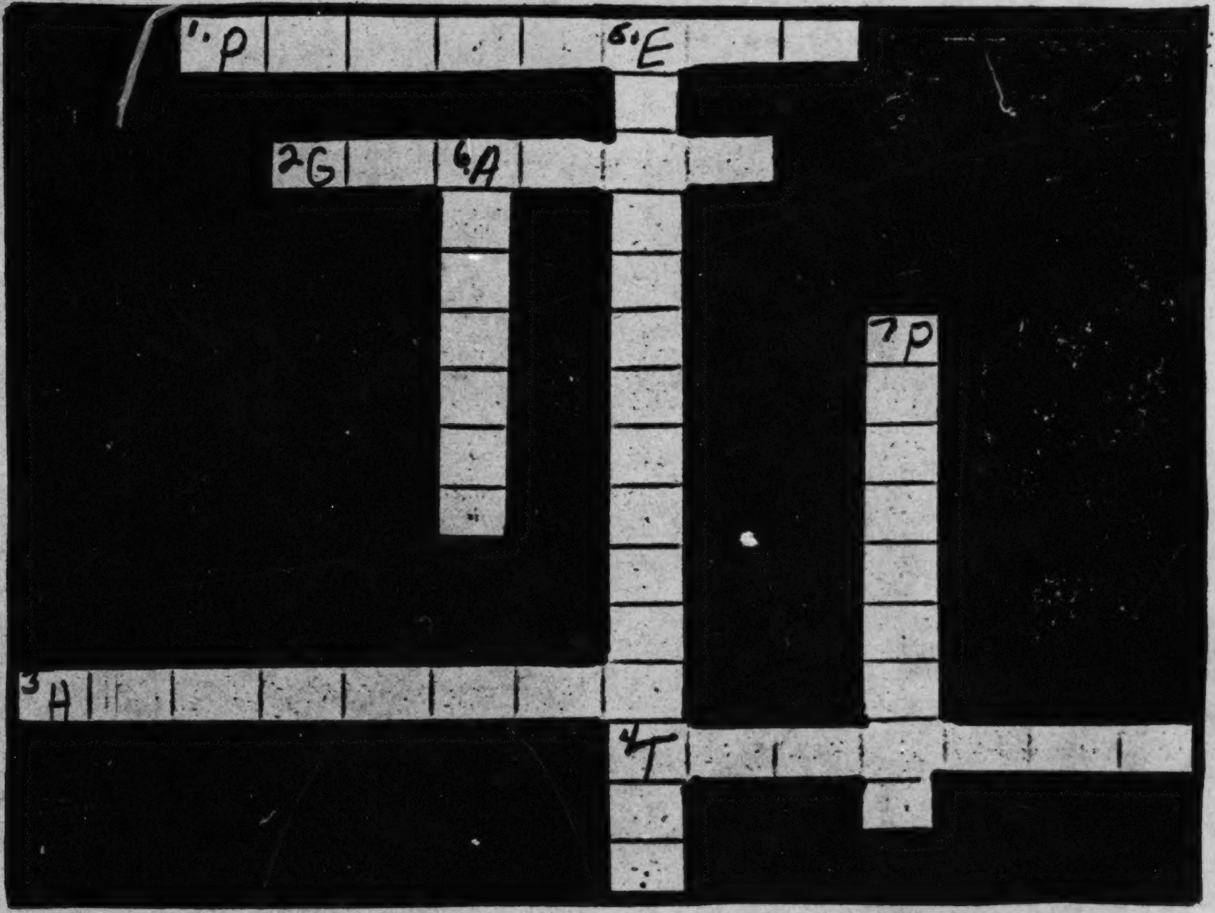
ACROSS	DOWN
1. Pancreas	5. Endocrine System
2. Glands	6. Adrenal
3. Hormones	7. Pituitary
4. Thyroid	

PROJECT: C.H.A.N.G.E.
4TH GRADE CURRICULUM
PHYSIOLOGY OF THE ENDOCRINE SYSTEM

ES 3

NAME ______________________________

ENDOCRINE SYSTEM CROSSWORD PUZZLE



ACROSS

1. An organ located behind the stomach containing groups of cells called the islets of Langerhans which produce insulin.
2. Cells or groups of cells which prepare and secrete a substance for further use or discharge from the body.
3. Products of the glands in the Endocrine System.
4. A gland located alongside the windpipe in the neck which controls the rate at which the body uses food and oxygen.

DOWN

5. A system of ten ductless glands which produce hormones which control and integrate various bodily activities.
6. One of two glands located above each kidney which in times of danger or anger secrete a hormone which enables a person to react quickly.
7. A gland located at the base of the brain called the master gland for it controls the other endocrine glands and the growth of the body.

PROJECT: C.H.A.N.G.E.
4TH GRADE CURRICULUM
ENDOCRINE SYSTEM

ACTIVITY:

Filmstrip - "The Human Endocrine System"

OBJECTIVE:

To review the various glands of the Endocrine System and their functions.

MATERIALS:

Filmstrip and casette - "The Human Endocrine System"
(Encyclopedia Britannica)

PROCEDURE:

After viewing the filmstrip, discuss it using the following questions

1. What helps control and balance the systems of the central nervous system and endocrine system?
2. What does the pituitary gland do?
3. What does the thyroid gland do?
4. Where are the Parothyroid glands? What do they do?
5. Where is the pancreas? What does it do?
6. Where are the adrenal glands? What do they do?
7. What is the function of the testes and ovaries?
8. What is glucose? How is it controlled?
9. Where does insulin come from? What does it do?
10. What is a feedback loop?
11. What are some of the changes which occur in the body at different times of the day or during different activities?

ACTIVITY:

Book - Endocrine System by Alvin Silverstein and Virginia B. Silverstein

OBJECTIVE:

To provide more information on the Endocrine System to students who want to carry their investigation of the Endocrine System further.

MATERIALS:

Book - Endocrine System by Alvin Silverstein and
Virginia Silverstein
(Prentice Hall, Inc.)

PROCEDURE:

Have the children read the book and write a brief report. They should include the title and the author and list the new information they learned by reading the book.

PROJECT: C.H.A.N.G.E.
4TH GRADE CURRICULUM
PHYSIOLOGY OF THE ENDOCRINE SYSTEM

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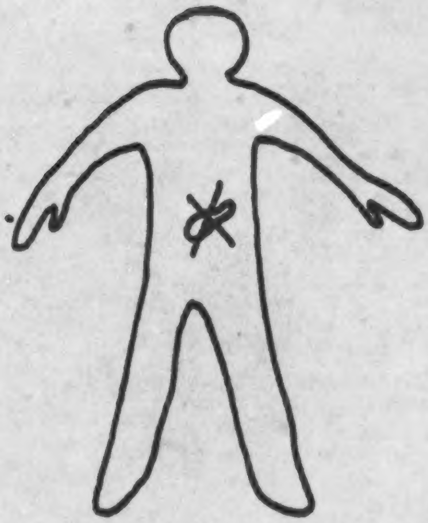
DIABETES



INTERMEDIATE LEVEL

PROJECT: C.H.A.N.G.E.
4TH GRADE CURRICULUM

INTRODUCTION: DIABETES

Diabetes is studied because it is a disease affecting many people in our society. It is also one of the major causes of blindness. The students will know the symptoms of diabetes and the measures used to control it. Through this knowledge an acceptance and understanding of diabetes will be developed.

The objectives and concepts for this unit are:

Unit	Objective	Concept
Handicap: Diabetes	The student can define diabetes and various types (juvenile and adult onset)	Diabetes mellitus is a chronic disease characterized by abnormalities of the endocrine secretions of the pancreas, resulting in disordered metabolism of carbohydrates, fat, and protein and in time structural abnormalities in a variety of tissues. Diabetes is a long term physical condition in which the body cannot make use of sugars and starches in a normal way. Juvenile diabetes is a severe form usually appearing in childhood or adolesence. It can progress rapidly and may shorten life expectancy. It can cause blindness and kidney failure and is marked by a total lack of insulin. Maturity-onset diabetes is usually less abrupt in onset and less severe than the juvenile type. Some adult onset diabetics usually can produce some insulin. Some may have normal or even elevated insulin production, but their bodies just can't use the insulin efficiently. Diabetes is a disease that cannot be cured but usually can be controlled with the use of a planned diet (i.e. measured amounts of fats, protein and carbohydrates) and/or medication and exercise. Diabetes is not a contagious disease.

Unit	Objective	Concept
Diabetes (Cont.)	The student can identify symptoms of diabetes mellitus.	Some diabetics (especially those who are older) may experience few symptoms or no symptoms at all. Today many cases are detected before symptoms appear. Some symptoms are: frequent urination, excessive thirst, extreme hunger, rapid weight loss, drowsiness, easily tiring, general weakness, blurred vision, skin infections, boils, etc.
	The student can state that certain age groups and types of people are more susceptible to diabetes.	People with diabetic relatives (heredity may be a strong factor in diabetes). Diabetes is usually a disease of middle age and old age, (usually occuring in those over 30 - accounting for 90% of the population). People who are overweight. More women than men are diabetics (two out of every three diabetics are women). Juvenile-onset diabetes usually develops abruptly during childhood or puberty and is a severe form of diabetes marked by a total lack of insulin.
	The student can identify the ways of treating and controlling diabetes.	In some patients, diabetes can be controlled by a special diet and exercise alone. The diet consists of a controlled amount of carbohydrates, fats and proteins. It is a highly individual diet. If over-weight, it may be necessary for the individual to control calorie intake. Usually in the individual with mild diabetes, the disease is controlled by the use of diet, exercise and oral medication. Oral medication is not insulin; it stimulates the pancreas to produce it's own insulin.

Unit	Objective	Concept
Diabetes (Cont.)		When neither diet nor medication is sufficient to control diabetes, insulin (extracted from the pancreas of animals) must be used. Insulin is taken by injection, for it is destroyed in the stomach by gastric juices if taken orally. Diet and exercise are also used in conjunction with the insulin. This is always the treatment in juvenile diabetes and sometimes necessary in mature onset diabetes. It is necessary for diabetics to test their urine daily. This tells whether the level of the blood sugar is too high(with too much sugar). This test consists of dipping a specially prepared strip of paper into a urine sample. The color of the paper is then compared to a color chart to determine the appropriate sugar level.
	The student can identify that reactions requiring emergency treatment can occur due to carelessness, severe emotional stress, illness or lack of medical treatment in unknown diabetes.	Insulin reaction occurs when the level of the blood sugar is too low due to too much insulin, too little food, or over-exercise. It occurs most often in those who take insulin, or occasionally in those who take oral medication. The warning signs are pale, moist skin, excited behavior, normal to shallow breathing, hunger, slight or no sugar in the urine,and weakness. Proper treatment would be medical attention during which the individual would be given some form of sugar. Acidosis or diabetic coma occurs when the level of body insulin is too low due to neglect in taking prescribed medication daily, poor diet, illness, or excessive exercise. This can cause an excess of fatty acids in the body (acidosis) and lead to diabetic coma. The warning signs are flushed, dry skin, a gradual onset of symptoms, drowsy behavior, fruity odor on the breath, deep labored breathing, vomiting, dry tongue, thirst, and large amounts

Unit	Objective	Concept
Diabetes (Cont.)		of sugar in urine. Proper treatment would be immediate medical attention during which the individual would receive proper insulin injection.
	The student recognizes that handicapped people (diabetics) are worthwhile individuals.	Diabetic people have the same basic needs as people who are not diabetic. Diabetic people may have some difficulty coping with the misconceptions some people have about their handicap.

PROJECT: C.H.A.N.G.E.
4TH GRADE CURRICULUM
DIABETES

ACTIVITY:

1) Diabetes Vocabulary List
2) Diabetes Lecture

OBJECTIVE:

Students know the causes and treatment of diabetes mellitus.

MATERIALS:

1) Diabetes Vocabulary List
2) Lecture: Diabetes

PROCEDURE:

Have copies of the diabetes vocabulary list and the lecture run off, so that every student has a copy of each. Begin by familiarizing the pupils with the list of diabetic terms. Then read the lecture with them. Follow with a discussion period, using the following questions:

1) Which type of diabetes is the most severe?
2) What are some of the symptoms of diabetes?
3) At what ages is a person most likely to get diabetics?
4) What glands are not working properly in the diabetic? Where are they located?
5) What are the two types of insulin reactions? How are they treated?
6) What must a diabetic do every morning upon awakening?

7) What types of medication might a diabetic need? What other treatments besides medication must a diabetic follow?

PROJECT: C.H.A.N.G.E.
4TH GRADE CURRICULUM
LECTURE: DIABETES

Diabetes Mellitus is a long term disease in which the Beta Cells in the pancreas, one gland in the endocrine system, do not work properly. The islands of Langerhans located in the pancreas produce the hormone insulin. Insulin goes into the blood stream and works to break down the sugar in the blood so the body can use it. When there is not enough insulin or none at all, the build-up of sugar in the blood becomes a very dangerous situation for the body. Unless it is controlled, the person can lapse into a coma and die. Fortunately scientists have found ways to keep this disease under control.

The most severe form of diabetes is the insulin-dependent diabetic. This form always occurs in children or teenagers, but can also occur in adults. It is most severe because in this form of diabetes, the body produces NO insulin at all. In less severe forms of diabetes, the body does produce SOME insulin.

People who get diabetes usually fall into certain categories. For instance people who have relatives with diabetes are more likely to get it. Usually it occurs in people over thirty. Women are more likely to get it than men. People who are overweight are also more likely to get diabetes.

Some of the symptoms of diabetes are: frequent urination, excessive thirst, extreme hunger, rapid weight loss or gain, drowsiness, tiring easily, general weakness, blurred vision, skin infections and boils. Another symptom is when sugar is found in the urine.

Once a person is found to have diabetes a variety of treatments are possible. Some mild forms of diabetes may be treated with diet and exercise alone. The diet consists of a controlled amount of carbohydrates, fats and proteins. It is a highly individual diet.

Usually a person with mild diabetes controls the disease with a balance of diet, exercise and oral medication. The oral medication is not insulin. It stimulates the pancreas to make its own insulin.

When a person is a more severe diabetic and the pancreas produces NO insulin, he or she needs insulin. Insulin must be injected into the body. It cannot be taken orally because the gastric juices in the stomach destroy insulin.

All diabetics regardless of whether they need insulin or oral medication must follow a controlled diet and have sufficient exercise.

Diabetics must also test their urine daily. This tells whethur the level of the blood sugar is too low (with too much insulin) or too high (with too much sugar. This test consists of dipping a specially prepared strip of paper into the urine sample. The color of the paper is then compared to a color chart to determine the appropriate sugar level.

Sometimes a diabetic may require emergency treatment. This may happen if the person doesn't know he or she is a diabetic, if the person wasn't following his or her diet, if they didn't take their medication, if they are under severe emotional stress or become ill. The diabetic may experience one of two reactions. One is called an insulin reaction and the other a diabetic coma or acidosis.

A person experiencing an insulin reaction may exhibit the following symptoms: 1) Usually fast onset, 2) pale, moist skin, 3) excited behavior, 4) normal to shallow breathing, 5) hunger, and 6) slight or no sugar in the urine. The proper treatment for a person with an insulin reaction is for them to be given a measured amount of sugar by a proper medical authority or doctor. The cause of the insulin reaction may be due to too much insulin, too little food or over-exercise. It occurs most often among people who only take insulin or occasionally in those who take oral medication.

A person experiencing a diabetic coma or acidosis reaction may exhibit the following symptoms: 1) flushed dry skin, 2) drowsiness, 3) fruity odor on the breath, 4) deep labored breathing, 5) vomiting, 6) dry tongue, 7) thirst, and 8) a large amount of sugar in the urine. The person goes into this coma because the level or sugar is too high. This can happen when a person doesn't take their medication either oral or insulin; when they neglect their diet or over-exercise, or when they do not know they have the disease. The proper treatment for diabetic coma is immediate proper medical attention during which the person would receive the proper insulin injection.

Diabetes being a chronic or long term disease requires the proper treatment and control measures all the time. It is not an easy matter to face a lifetime of controlled diet, exercise and maybe daily shots. Diabetics need understanding and support from others. They have the same basic needs as others and sometimes have trouble coping with the misconceptions people have about their disease.

PROJECT: C.H.A.N.G.E.
4TH GRADE CURRICULUM
DIABETES

DIABETES VOCABULARY LIST

DIABETES MELLITUS- A long term disease in which the Islands of Langerhans located in the pancreas do not produce enough insulin. Because of this condition the body cannot make use of starches, sugars and fats in the normal way.

JUVENILE DIABETES- A severe form of diabetes occuring in childhood or adolescence.

MATURITY ONSET DIABETES- A form of diabetes which occurs in the mature person.

SYMPTOMS OF DIABETES- Frequent urination, excessive thirst, extreme hunger, rapid weight loss or gain, drowsiness, tiring easily, general weakness, blurred vision, skin infections and boils.

PANCREAS- An organ located near the stomach containing the Islands of Langerhans.

ISLANDS OF LANGERHANS- Cells scattered like islands throughout the pancreas that produce insulin.

DIET- Controlled amounts of carbohydrates, fats and proteins.

ORAL MEDICATION- Not insulin - Medicine to stimulate the pancreas to produce insulin.

INSULIN- A substance which is extracted from the pancreas of animals and is injected into the diabetic. Human beings also produce this substance.

EXERCISE- A controlled amount of this is necessary along with a proper diet.

URINE TEST- Diabetic dips a piece of specially treated paper into the urine and compares it to a color chart provided to determine the level of sugar in the urine.

INSULIN REACTION- Characterized by too little sugar in the blood. This usually occurs in the person who has had too little food or too much exercise.

DIABETIC COMA OR ACIDOSIS- Characterized by too much sugar in the blood. This usually occurs when the person has not taken their daily medication, is ill, has had a poor diet or too much exercise.

PROJECT: C.H.A.N.G.E.
4TH GRADE CURRICULUM
DIABETES

ACTIVITY:

Diabetes Matching Puzzle

OBJECTIVE:

To further reinforce the terms and definitions associated with diabetes.

MATERIALS:

Diabetes Matching Puzzle

PROCEDURE:

Allow the children to work the puzzle using the diabetic terms sheet. Allow time for correction and discussion of puzzles when they complete them.

ANSWER KEY: DIET, EXERCISE

PROJECT: C.H.A.N.G.E.
4TH GRADE CURRICULUM
DIABETES - MATCHING PUZZLE

NAME____

Match the letters on the right with the numbers on the left to find two things necessary to a diabetic.

______ 1. Diabetes Mellitus

______ 2. Juvenile Diabetes

______ 3. Maturity Onset Diabetes

______ 4. Pancreas

______ 5. Diet

______ 6. Oral medication

______ 7. Islands of Langerhans

______ 8. Insulin

______ 9. Acidosis

______ 10. Exercise

______ 11. Insulin reaction

______ 12 Urine test

I. An organ located near the stomach containing the islands of Langerhans.

E. Controlled amount of carbohydrates, fats and proteins.

I. A diabetic needs a controlled amount of this.

R. A substance extracted from the pancreas of animals and injected into the diabetic.

S. Occurs when there is too much insulin in the blood.

E. When a diabetic dips specially treated paper into the urine and checks it with a color chart to determine the amount of sugar in the blood.

D. A long term disease occuring when the body doesn't produce enough insulin.

E. A form of diabetes occuring in the mature person which is not usually as severe as juvenile diabetes.

X. Not insulin, but a medicine taken orally to stimulate the body to produce insulin.

I. A severe form of diabetes occuring in childhood or adolescence.

E. Cells scattered like islands throughout the pancreas that produce insulin.

C. Occurs when there is too much sugar in the urine.

PROJECT: C.H.A.N.G.E.
4TH GRADE CURRICULUM
DIABETES

ACTIVITY:

The students write a story about a person or child with diabetes.

OBJECTIVE:

Students can identify with persons having diabetes and the problems they encounter.

MATERIALS:

Paper, pen

PROCEDURE:

Tell the class to write a story about a person or a child with diabetes. Some suggestions that may be offered to them are:

1) a child having an insulin reaction
2) a child who is a diabetic who hates shots and must have insulin
3) how I would feel if I were a diabetic

PROJECT: C.H.A.N.G.E.
4TH GRADE CURRICULUM
DIABETES

ACTIVITY:

Role Playing

OBJECTIVE:

To provide the students with the opportunity to understand what it's like to be a diabetic and to review the symptoms of an insulin reaction or a persons symptoms when entering a diabetic coma.

MATERIALS:

Thinking caps

PROCEDURE:

1) Allow one student to play the part of a diabetic person going into insulin shock. Have this student role play the symptoms. Have another student tell what the correct medical attention should be.
2) Repeat the procedure having another student role play a diabetic going into a diabetic coma.

PROJECT: C.H.A.N.G.E.
4th GRADE CURRICULUM
DIABETES

ACTIVITY:

Pamphlet: "What Everyone Should Know About Diabetes."

OBJECTIVES:

Students know the symptoms, causes and treatment for diabetes.

MATERIALS:

1) Pamphlet: "What Everyone Should Know About Diabetes." (A Scriptographic Booklet by Channing L. Bete Co., Inc., 1975 edition)
2) What everyone should know about diabetes (Worksheet)

PROCEDURE:

Read the pamphlet with the students. After they have read the pamphlet, the students are to be given the worksheet on diabetes. After completion of the worksheet, correct and discuss the answers with the students.

PROJECT: C.H.A.N.G.E.
4TH GRADE CURRICULUM
DIABETES
WHAT EVERYONE SHOULD KNOW ABOUT DIABETES

NAME____

1. How are food sugars used by the body?

    1. ____
    2. ____
    3. ____
    4. ____

2. What happens to the food sugars in a person with diabetes?

3. What are some of the theories scientists have on why people get diabetes?

    1. ____
    2. ____
    3. ____
    4. ____

4. What are the types of people most likely to get diabetes?

    1. ____
    2. ____
    3. ____

5. List the symptoms of diabetes.

6. What tests does a doctor use to find out if a person has diabetes?

    1. ____
    2. ____
    3. ____

7. What are two types of diabetes?

1.____

2.____

8. What are the usual treatments for diabetes?

1.____

2.____

3.____

4.____

9. What parts of the body may a person with diabetes inject insulin?

1.____

2.____

3.____

10. Name two types of reaction a diabetic may have.

1.____

2.____

11. What are signs of an insulin reaction?

1.____

2.____

3.____

4.____

5.____

6.____

7.____

8.____

9.____

10.____

12. What are the signs of an acidosis or diabetic coma reaction?

1.____

2.____

3.____

4.____

5.____

6.____

7.____

8.____

9.____

10.____

13. What kinds of complications might diabetes lead to?

1.____

2.____

3.____

4.____

PROJECT: C.H.A.N.G.E.
4TH GRADE CURRICULUM
DIABETES

Activity:

Book You Can't Catch Diabetes From a Friend

Objectives:

Students understand the special problems encountered by a child who has diabetes.

Materials:

Book, You Can't Catch Diabetes from a Friend by Lynne Kipnis and Susan Adler (Triad Scientific Publishers. Gainesville, Florida 1979.)

Procedure:

The teacher may wish to read the book to the class allowing for discussion and questions afterwards. The book may be assigned as supplementary reading for those students who wish to read more about the effects of diabetes. In this case, a book report may be assigned. The report should include the title, author and a brief summary. The report may be shared with the class.

PROJECT: C.H.A.N.G.E.
4TH GRADE CURRICULUM
DIABETES

Activity:

Book: The Sugar Disease: Diabetes by Dr. Alvin Silverstein and Virginia B. Silverstein.

Objectives:

Students know the causes, physical manifestations, and treatment of diabetes.

Materials:

Book: The Sugar Disease: Diabetes by Dr. Alvin Silverstein and Virginia B. Silverstein (J.B. Lippencott, New York 1980.)

Procedure:

The teacher may wish to read all or parts of the book to the class. If the teacher chooses to read only some parts of the book it is recommended to read "What is Diabetes? on p. 17, "What Goes Wrong? on p. 29, "Testing for Diabetes" on p. 59 and "How Diabetes is Treated" on p. 66.

The book may also be used as supplementary reading for students who wish to gain further knowledge about the disease. A report may be written which includes the title, author, and a brief summary. This report may be shared with the class.

PROJECT: C.H.A.N.G.E.
4TH GRADE CURRICULUM
DIABETES

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What Everyone Should Know About Diabetes. Channing L. Bete Co. Inc. 1975.

ABOUT THE STAFF

STAFF:

Director	Donald Martin
Coordinator	Sherry Smith
Assistant Coordinator	Alan Balter
Medical Consultant	LaVerne Galzin
Media Consultant	Cynthia Foulkes
Curriculum Coordinator	Karen Harper
Curriculum Advisor	Kathleen Delaney
Curriculum Advisor	Robert Honkisz
Graphic Artist	Karen Madden
Evaluation Consultant	A. Edward Ahr

Donald Martin, Project Director, holds B.A. and M.A.T. degrees from Harding College in Arkansas. He has worked as Assistant Principal at the Junior High School level, Director of a Demonstration Center for Gifted Children, and as Director of Federal Programs. As Program Director for Project C.H.A.N.G.E., he is responsible for the overall administration of the project.

Sherry Smith, Project Coordinator, has the B.A. from College of St. Francis in Illinois and M.S. from Chicago State University. Her previous experience includes classroom teaching and speech pathology at the elementary level. As Coordinator of Project C.H.A.N.G.E., she is responsible for the day-to-day operation of the program including grant writing, curriculum planning, and design of assessment instruments.

Alan Balter, Assistant Project Coordinator, has B.S., M.S., and Ph.D. degrees from the University of Illinois. He has worked as a teacher of retarded children, researcher, and university professor. As Assistant Coordinator, he helps with the daily functioning of the program and project dissemination.

LaVerne Galzin, Medical Consultant for the project, is a registered nurse who also holds the B.S. degree. She has wide experience working as a hospital nurse, public health nurse as well as a school nurse. In her role as Medical Consultant she explains nursing and medical information and strategies to program staff and is the program laisson to the medical profession.

Cynthia Foulkes, Media Consultant for the project, holds the B.S. in Education from Illinois State University and the M.S. in Education from Chicago State University. Her experience includes working as a School District Librarian and Director of a Learning Resource Center. She is responsible for ordering and processing all program materials as well as assisting program staff plan and execute audiovisual presentations.

Karen Harper, Curriculum Coordinator has the M.A, degree in Learning Disabilities and has many years of teaching experience in special education. She has developed the Kindergarten and Primary grades curriculum and supervised curriculum development at other levels.

Kathleen Delaney, Curriculum Advisor, has a B.A. degree from St. Xavier College in Illinois. She has worked as a teacher's aide in Project Head Start and as a teacher in the elementary grades. Her major responsibilities have been writing the project curriculum and lesson plans for grades 4-6.

Robert Honkisz, Curriculum Advisor, has the B.S. degree from the University of Illinois. He has worked as a physical education teacher in the elementary grades. His primary responsibilities have been writing project curriculum and lesson plans for grades 7-8.

Karen Madden, Graphic Artist, holds the B.S. degree from Northern Illinois University and the M.S. from Illinois Institute of Technology. She works as an Art Teacher for children between Kindergarten and 8th grade. Her major responsibility for the project involves producing original artwork for program materials.

A.Edward Ahr, Evaluation Consultant, has the B.S. and M.S. degrees from the University of New Mexico and the Ed.D. degree from Loyola University in Chicago. His work experience includes classroom teaching, school psychology, school administration and university teaching. His project responsibilities involve designing assessment techniques, statistical analysis of data and program evaluation.

RIDGELAND PUBLIC SCHOOLS
DISTRICT 122
TITLE IV C - ESEA
PROJECT: C.H.A.N.G.E.
TEACHER MANUAL

CONCEPTS OF HANDICAPS AND ATTITUDES NEED GUIDANCE AND EDUCATION

INTERMEDIATE CURRICULUM

CURRICULUM COORDINATOR: KATHLEEN DELANEY

SUPERINTENDENT: ROBERT L. OLCESE, Ph. D.

DIRECTOR: DONALD W. MARTIN COORDINATOR: M. SHERRY SMITH

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OVERVIEW OF THE INTERMEDIATE PROGRAM

FORMAT OF TEACHERS MANUAL

The intermediate program is divided into three separate curricula. Each level is composed of five units. The fourth grade units are: Acceptance of Self and Others (Handicapped and Non-Handicapped), Physiology of the Eye, Blindness, Physiology of the Endocrine System and Diabetes. At fifth grade, the units are: Acceptance of Self and Others (Handicapped and Non-Handicapped), Physiology of the Ear, Deafness, Physiology of the Oral Mechanism and Speech Impairments. The conclusion of the intermediate program is the following sixth grade units: Acceptance of Self and Others (Handicapped and Non-Handicapped), Physiology of the Central Nervous System, Epilepsy, Basic Anatomy and Physical Handicaps. For convenience, the Manual is divided by grade levels. Teachers should view the complete curriculum but need only their specific grade level for instructional purposes.

Each unit at a specific grade level includes:

1. Introduction, objectives and concepts
2. Activities

and a 3. Bibliography.

The Introduction provides the rationale and basis background information for the unit. The behavioral objectives state the desired student response/outcome for unit completion. Basic concepts are provided to further clarify each objective.

The Activities section is composed of a series of lesson plans. Each lesson plan includes:

1. Objectives - what the student should be able to do when the activity is completed
2. Materials - what is necessary to teach this lesson

and a 3. Procedure - specific suggestions on how to conduct the class activity or utilize films, filmstrips and books.

The Bibliography contains a brief synopsis of films, filmstrips and books which are appropriate for the unit.

SEQUENCE OF UNITS

Units are arranged in a predesignated order which best accomplishes the over-all goal of the program. The first unit at each level is Acceptance of Self and Others (Handicapped and Non-Handicapped). This unit precedes the study of specific disabilities based on the premise that in order to accept others one must first accept themselves.

In the Intermediate program, the normal functions of the body systems are studied prior to the deficiencies. An example, at the fourth grade level is the unit on the Physiology of the Eye and The Physiology of the Endocrine System which are studied in preparation for the disabilities units of Blindness and Diabetes. This portion of the program is related to the cognitive development of the students in the areas of handicaps.

At each grade level, topics were paired according to the cause-effect relationship of handicaps. For example, at the fourth grade curricula the units on Blindness and Diabetes are linked because of the correlation factor. Diabetes being the number one cause of blindness.

As one examines the fifth and sixth grade units reading through the introduction and concepts, one can see the correlation of the selected topics at each grade level.

The Intermediate program builds the necessary foundation of knowledge which culminates in the Junior High curriculum. For implementation of an effective and successful program, units should be taught in the order which they appear in the Manual.

TEACHING THE CURRICULUM

The program is designed for teachers to complete one activity per week with the students over a period of four months. Each unit covers a time span of three to five weeks. The teacher may choose a lesson plan described in the Activity section of the Manual or use/develop other materials which correlate with the objectives and concepts of the unit. The choice of materials and activities should be based on the objectives of the unit for each grade level and the individual needs of the class. Teachers should know the sequential development of the objectives at all grade levels when choosing Activities for a specific unit. In this way a cohesive program is presented to the student.

The lesson plans include various types of activities. Among these are:

1. Ingenuity Exercises - Each unit begins with a puzzle or matching exercise which familiarizes the students with the terminology used in the unit.
2. Lectures - For some topics, prepared lectures have been chosen as the best form of presentation. The lectures are based on the concepts and objectives for the unit. Through this format, medical terminology has been reduced to an understandable level for teachers and students while maintaining the predesigned program criteria.
3. Simulation Activities - During these activities the students experience what it's actually like to be handicapped by using a method to simulate a handicapping condition. This might be achieved by activities such as trying to pour water into a cup or find the classroom door while blindfolded.

These activities help the students to understand the problems a handicapped person encounters in daily living. They also establish a basis for acceptance by fostering the development of empathy for the disabled person. All students should have an opportunity to participate in simulation experiences. They should be encouraged to think about and describe how it feels to be handicapped.

4. Filmstrips, movies, and books - Lesson plans using films filmstrips and books are included. These materials help the students to better understand handicapping conditions. They should be used with the specific objective at the grade level. After viewing the material, discussions should help students to achieve the objectives. The lesson plans contain specific directions for use of audio-visual material. These materials are one method for developing empathy.

5. Class discussion - Students should be encouraged to ask questions and talk about their feelings. It is important to accept all feelings - even negative ones. Rather than judge students' feelings, the teachers should help the students to discover why they have a particular feeling.

6. Guest Speakers - Probably the most important and enjoyable activity of the program is providing an opportunity for students to interact with handicapped people. This experience allows the student to perceive the handicapped person as an individual with feelings, needs, talents, and problems similar to themselves.

An especially exciting speaker to invite is a person who is blind and uses a guide dog. Speakers may be found by asking friends, or contacting local agencies such as: The Association for the Blind, Division of Vocational Rehabilitation, Easter Seal Society, United Cerebral Palsy, local hospitals, etc. Speaker discussion topics must be correlated with the objectives at each grade level. Personally meeting someone with a disability in a positive atmosphere is an important experience in developing acceptance and empathy towards handicapped people as worthwhile individuals.

PROGRAM IMPLEMENTATION

LEARNING CENTER INSTRUCTIONS

The material for all Activities at each level are housed in the Learning Center. Materials are stored in appropriately marked unit boxes according to grade levels. All materials which are necessary for the unit can be found in this box.

The teacher checks the unit material box out of the learning center by signing the sign out card located on the top of the unit box.

After each lesson the teacher should place the materials used back in the unit box. The unit material box should then be returned to the learning center so it is accessible to other teachers at this level.

USE OF THE TEACHERS MANUAL

As previously explained in the Overview, one lesson per week (of your choice) from the Activities section is to completed with the students. The unit material boxes contain all the necessary articles for the lesson plan.

Starting with the first unit at your level, select one activity. After teaching the activity turn to the Lesson Plan Checklist located at the end of the unit and write the title of the activity on the line next to the appropriate week. Rate the Activity using the code on the Lesson Plan Checklist.

At the conclusion of each unit select one Activity which has been taught and evaluate this lesson on the Unit Evaluation Form (which follows the Lesson Plan Checklist). A Unit Evaluation Form must be completed for each unit.

CALL IN SCHEDULE

The "Call In" schedule provides the dates when Teacher Manuals are turned into the school office. At this time, the Lesson Plan Checklist and Unit Evaluation Forms are reviewed and initialed by tha Principal. Teachers Manuals are then returned promptly to the teachers for continued program implementation.

SPEAKERS LIST

A minimum of one guest speaker per grade level will be arranged by the Principal or a designee. After Speakers have been scheduled teachers will be notified of the date, time and location of the speaking engagement. Whenever possible, teachers will be allowed to sign up for the time of their choice.

Teachers will be notified of speaker cancellations as soon as possible.

ASSESSMENT INSTRUMENTS

A Skill Attainment Checklist has been designed for each level of the program. These instruments are designed to measure the students achievement in terms of grade level objectives and concepts.

Student instruments are given pre and post the intervening program. Both experimental and control students participate in the assessment instruments to determine the statistical level of significance the project has achieved.

Complete instructions for the instruments are packaged with the assessment materials.

READABILITY STUDY

Nancy Updegraff
Reading Consultant

In each of the work sheets the readability level varies from two years below the grade for which the sheet was designed, to a half year above the grade listed on the top of the sheet. Therefore, the majority of the students (with some assistance on terms) should be able to read the worksheets.

Much of the terminology is complicated and difficult to pronounce. It is not important for students to correctly pronounce terms in order to identify them or to read the material around them. If a term seems bothersome tell the student to call it blank or blank and match or read as needed. For word puzzles the student should be able to locate the word or tell it is on a cross word puzzle by process of elimination even though they may not be able to correctly pronounce it. Worksheets can be done orally, in a group or in partners.

ACCEPTANCE OF SELF & OTHERS

(HANDICAPPED AND NON-HANDICAPPED)

INTERMEDIATE LEVEL

PROJECT: C.H.A.N.G.E.
TITLE IV C

INTRODUCING THE UNITS

Project C.H.A.N.G.E. has been written to educate children about handicaps and handicapped people. It also attempts to awaken in the children an understanding that handicapped people have feelings and a sense of self worth just as normal people do. The curriculum and lesson plans are provided by Project C.H.A.N.G.E., but it is the teacher who makes the program a success in the classroom.

In order for the lessons to be more effective, a teacher should become familiar with the topic by reading the objectives and concepts of the unit. A teacher who is acquainted with the information on handicaps feels more confident about relating and discussing it with the students.

As a reinforcement, the teacher should teach the concepts of each unit prior to doing the lesson plans. This can be done by simply reading the concepts to the students and discussing important points with them.

Project C.H.A.N.G.E. provides the information for children to gain knowledge about handicaps and to develop a positive attitude toward handicapped people. It is the teacher who gives the students the opportunity to gain cognitively and affectively by making a conscientious effort to implement Project C.H.A.N.G.E. into the classroom.

PROJECT: C.H.A.N.G.E.
5TH GRADE CURRICULUM
INTRODUCTION: ACCEPTANCE OF SELF AND OTHERS

Since the main goal of PROJECT: C.H.A.N.G.E. is to change the attitudes of the children towards people with handicaps, it becomes equally important for children to see and accept themselves as different. Only then can the child accept differences in others. It is for this reason that this is the first topic to be studied at the fifth grade level.

The basic objectives and concepts which are taught in this unit are:

Unit	Objective	Concept
Acceptance of Self and Others	The students recognize that all people even though sharing many common traits are unique with individual characteristics.	1. People have individual interests, talents, and abilities that make them unique. 2. Ones individuality is based on a composite of various factors; physical features nationality health intellectual ability family talents weaknesses likes and dislikes
	The students understand the importance of accepting themselves and others as unique individuals.	1. It is this uniqueness that makes each of us important and interesting.

PROJECT: C.H.A.N.G.E.
5TH GRADE CURRICULUM
ACCEPTANCE OF SELF AND OTHERS

ACTIVITY:

Worksheet "What Makes You Different?"

OBJECTIVE:

Children see how they are different from each of their classmates. This is also to have the children become familiar with the terminology used in this unit.

MATERIALS:

Worksheet "What Makes You Different?"

PROCEDURE:

Have students complete the worksheet; then share the results with the class.

PROJECT: C.H.A.N.G.E.
5TH GRADE CURRICULUM
ACCEPTANCE OF SELF AND OTHERS

WHAT MAKES YOU DIFFERENT ?

NAME ____

1. Describe your physical appearance.

2. What nationality are you?

3. Do you have any health problems? (ex. wearing glasses)

4. How intelligent do you think you are?

5. Describe your family.

    A. How many children in your family?
    B. What do you think your parents find more important, your education or your behavior?
    C. Does your family practice any special customs on special holidays such as Christmas and Easter?

6. Name some of your talents.

7. Name some of your weaknesses.

8. Name two or three things you like.

9. Name two or three things you dislike.

10. What is your favorite subject in school?

PROJECT: C.H.A.N.G.E.
5TH GRADE CURRICULUM
ACCEPTANCE OF SELF AND OTHERS

ACTIVITY:

Filmstrip and Cassette "How Are You Different?"
Your Different, So Am I

OBJECTIVE:

Children become aware that everyone is different and that is perfectly acceptable.

MATERIALS:

Filmstrip and Cassette "How Are You Different" Part I from the kit Your Different, So Am I (Guidance Associates Co.), and the teachers guide "Your Different, So Am I."

PROCEDURE:

After viewing the filmstrip, discuss it using the questions on page 8 and 9 of the teachers guide.

PROJECT: C.H.A.N.G.E.
5TH GRADE CURRICULUM
ACCEPTANCE OF SELF AND OTHERS

ACTIVITY:

View Filmstrip and Cassette "The Runt"

Have class complete Activity Sheet Experience 2 "The Runt"

OBJECTIVE:

The children gain the understanding that a difference such as smallness can be both an advantage and a disadvantage.

MATERIALS:

Filmstrip and Cassette "The Runt", from the kit Fat Albert and the Cosby Kids (McGraw Hill Films), and Activity Sheet Experience 2 "The Runt".

PROCEDURE:

After showing the filmstrip distribute the worksheet found in the back of the manual. Have the class complete it and use it as a basis for discussion.

PROJECT: C.H.A.N.G.E.
5TH GRADE CURRICULUM
ACCEPTANCE OF SELF AND OTHERS

ACTIVITY:

Read and report on one of the books listed in the "Materials" section of the lesson plan.

OBJECTIVE:

Children gain further insight into others who like themselves have differences which they have to learn to cope with.

MATERIALS:

The Sand Bird, by Margaret Baker (Thomas Nelson, Inc.)

A Dog for Joey, by Nan Gilbert (Harper and Row Publishers)

Stupid Marco, by Joy Williams (Parents Magazine Press)

Kelly's Creek, by Doris Buchanan Smith (Thomas Y. Crowell Co.)

PROCEDURE:

This is primarily an extra project for students who are interested. The book report can include: the title, the author's name, a brief summary. The child may wish to share his or her report to the class.

PROJECT: C.H.A.N.G.E.
5TH GRADE CURRICULUM
ACCEPTANCE OF SELF AND OTHERS
(HANDICAPPED AND NON HANDICAPPED

ACTIVITY:

Roll-a-Role (game)

OBJECTIVE:

Students recognize there are many differences among people.

MATERIALS:

Game: Roll-a-Role (The Ungame Co. Anaheim, Ca. 1976.)

PROCEDURE:

The game lends itself well to use by the whole class. Follow the instructions inside the box. Topics on a more mature level are specially marked and the teacher may decide not to use them. After each role has been acted out the class may wish to discuss their personal views on the presentation.

PROJECT: C.H.A.N.G.E.
5TH GRADE CURRICULUM
ACCEPTANCE OF SELF AND OTHERS
(HANDICAPPED AND NON-HANDICAPPED)

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"How are You Different?" Your Different So Am I. Guidance Associates, 1978.

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Smith, Doris Buchanan. Kelly's Creek. New York: Thomas Y. Crowel Co. 1975.

"The Runt". Fat Albert and the Cosby Kids. Mc Grow Hill Films, 1978.

Williams, Joy. Stupid Marco. New York: Parents Magazine Press, 1970.

PHYSIOLOGY OF THE EAR

INTERMEDIATE LEVEL

PROJECT: C.H.A.N.G.E.
5TH GRADE CURRICULUM
INTRODUCTION: PHYSIOLOGY OF THE EAR

In order for the students to properly understand deafness, it is important for them to first understand the function of a normal ear. Deafness is the physical handicap which is taught following the physiology of the ear. Deafness is caused when any one or several parts of the ear malfunction. In order to understand the cause of a particular person's deafness, one must know how the ear should function normally.

The basic objectives and concepts taught in this unit are:

Unit	Objective	Concept
Physiology of the Ear	The students understand the definition of sound waves.	A sound wave is a vibration in the air. The more vibrations each second the higher the pitch of the sound. Loudness depends on the height or strength of vibrations. The higher the waves, the louder the sound.
	The students can name the parts of the ear and list the functions of each.	Ear is divided into three parts or chambers: the outer ear, the middle ear and the inner ear. Sound waves travel through the outer ear or pinna. The pinna is made up of the auricle (part of the ear that can be seen) and the external auditory canal. The auricle collects sound waves and directs them into the external auditory canal. This canal is about 1½ inches long. The outer third of this canal is lined with fine hairs and tiny glands that produce wax. The hairs and wax trap dust, insects and other small particles and keep them from damaging the inner parts of the ear. Dividing the outer ear from the middle ear is the tympanic membrane or ear drum. This is a thin sheet of tissue about ¼ inch across. The ear drum vibrates when sound waves pass through it.

PROJECT: C.H.A.N.G.E.
5th GRADE CURRICULUM
INTRODUCTION: PHYSIOLOGY OF THE EAR

Unit	Objective	Concept
Physiology of the Ear (Cont.)	The students can name the parts of the ear and list the functions of each (Cont.)	Following the ear drum is the middle ear which contains the three auditory ossicles (or the ossicle chain). 1) The malleus (hammer) 2) Incus (anvil) 3) Stapes (stirrup) The malleus is connected to the ear drum or tympanic membrane. As the ear drum vibrates, it starts the malleus which is attached to it "pounding" on the incus which then quivers "shaking" the attached stapes against the oval window. The oval window is a membrane similar to the tympanic membrane. The opening from the eustachian tube is also located in the middle ear chamber. This leads from the middle ear downward, forward, and inward to the nasal pharynx, the part of the throat behind the nose. Its function is to equalize pressure on each side of the tympanic membrane (ex. swallowing). It can also serve as a pathway for infection to spread from the nose and throat into the middle ear or vice versa. The oval window forms the entrance to the inner ear which house the cochlea and the semi-circular canals. The cochlea contains a fluid called paralymph which carries the vibrations and moves the 24,000 fibers of the basilar membrane. These fibers stimulate the hair cells that make up the part of the cochlea called the organ of corti. This stimulates the nerves attached to them and sends messages through the auditory nerve to the temporal lobe

PROJECT: C.H.A.N.G.E.
5TH GRADE CURRICULUM
INTRODUCTION: PHYSIOLOGY OF THE EAR

UNIT	OBJECTIVE	CONCEPT
Physiology of the Ear (cont.)	The students can name the parts of the ear and list the functions of each (cont.)	which is the center of hearing in the brain.
	The students recognize that besides hearing, the inner ear also enables persons to maintain equilibrium.	The inner ear also has three fluid filled semi circular canals. When the head moves in any direction the fluid moves, affecting delicate hair cells at the end of each canal. These hair cells are supplied with fine fibers from the vestibular nerve which carries impulses to the brain. The brain interprets these impulses and sends messages to the various muscles of the neck trunk, and limbs that maintain the balance of the body.
	The students understand one method used to detect hearing loss.	An audiometer is an instrument which measures the decibel (loudness) level of the sound and the pitch or frequency of the vibrations. An audiologist is a person trained to test levels of hearing by using various types of equipment. The audiologist graphs the findings from these tests on an audiogram. An audiogram is a graph plotting the hearing threshold of an individual. In many schools students are given hearing screening tests by school nurse for early detection of a hearin problem before it becomes serious or permanent.

PROJECT: C.H.A.N.G.E.
5TH GRADE CURRICULUM
PHYSIOLOGY OF THE EAR

ACTIVITY:

Filmstrip: "You and Your Ears"

OBJECTIVE:

Students can name parts of the ear and their function.

MATERIALS:

Filmstrip "You and Your Ears" from the kit You and Your Health, (Walt Disney Educational Media Company.)

PROCEDURE:

After viewing the filmstrip, question the children on the path of sound to the brain, naming the parts of the ear and their function.

PROJECT: C.H.A.N.G.E.
5TH GRADE CURRICULUM
PHYSIOLOGY OF THE EAR

ACTIVITY:

Ear Model

OBJECTIVE:

The children are able to label the parts of the ear.

MATERIALS:

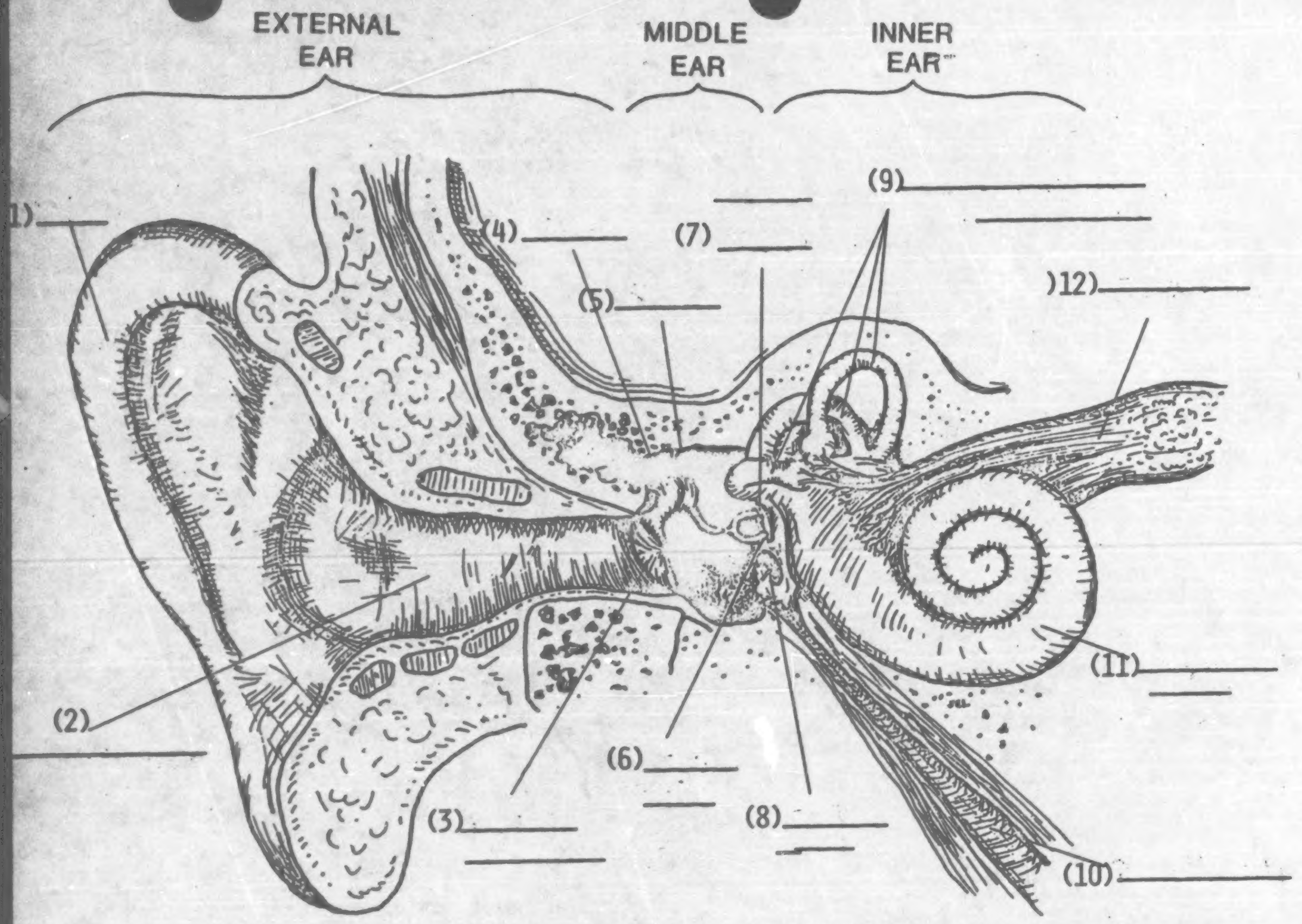
1) Overhead of Diagram of the ear

PROCEDURE:

1) Use the overhead and discuss the parts of the ear with the class; by tracing the path of sound to the brain.
2) Write in the parts on the overhead with the class.

ANSWER KEY

1. Auricle
2. External Auditory Canal
3. Tympanic Membrane
4. Malleus
5. Incus
6. Stapes
7. Oval Window
8. Round Window
9. Semi Circular Canals
10. Eustacian Tube
11. Cochlea
12. Auditory Nerve


EXTERNAL EAR
MIDDLE EAR
INNER EAR
1)
(2)
(3)
(4)
(5)
(6)
(7)
(8)
(9)
(10)
(11)
)12)

Oval Window
Cochlea
Stapes
External Auditory Canal
Incus
Eustachian Tube
Round Window
Malleus
Auditory Nerve
Tympanic Membrane
Auricle
Semi Circular Canals

Fig.1 ANATOMY OF THE HUMAN EAR

PROJECT: C.H.A.N.G.E.
5TH GRADE CURRICULUM
PHYSIOLOGY OF THE EAR

ACTIVITY:

Ear Model Worksheet (E-5)

OBJECTIVE:

The children are able to label the parts of the ear on the diagram.

MATERIALS:

Worksheet on the ear model.

PROCEDURE:

Distribute the ear model worksheet to each member of the class and allow them to label the parts of the ear.

ANSWER KEY

1. Auricle
2. External Auditory Canal
3. Tympanic Membrane
4. Malleus
5. Incus
6. Stapes
7. Oval Window
8. Round Window
9. Semi Circular Canals
10. Eustacian Tube
11. Cochlea
12. Auditory Nerve

PROJECT: C.H.A.N.G.E.
5TH GRADE CURRICULUM
PHYSIOLOGY OF THE EAR

ACTIVITY:

Ear Definition Match

OBJECTIVE:

The children become familiar with associated terminology and the functions of each part of the ear.

MATERIALS:

1. Chart #7, "The Human Body: Systems for Sensing and Moving". (EBEC), 1977
2. Ear Definition Match

PROCEDURE:

Hold up the chart and read the important information to the class. Define the parts of the ear as illustrated on the chart. Have the class complete the ear definition match.

PROJECT: C.H.A.N.G.E.
5TH GRADE CURRICULUM
PHYSIOLOGY OF THE EAR

EAR DEFINITION MATCH

NAME ________________________________

DIRECTIONS: Place the letter of the best definition in front of the part of the ear it describes.

____ 1. Pinna
____ 2. Auricle
____ 3. Auditory Canal
____ 4. Tympanic Membrane
____ 5. Malleus
____ 6. Incus
____ 7. Stapes
____ 8. Eustachian Tube
____ 9. Oval Window
____ 10. Cochlea
____ 11. Semi Circular Canals
____ 12. Auditory Nerve

A. Looks like an anvil
B. Another name for the outer ear.
C. Ear drum
D. Part of the ear you can see.
E. Looks like a hammer
F. A membrane forming the entrance to the inner ear.
G. Carries sound to the brain.
H. Part of the outer ear which has tiny hairs which produce wax.
I. Contains fluid called parolymph and looks like a snail.
J. Looks like a stirrup.
K. Part of the inner ear which aids balance.
L. Leads from the middle ear to the nasal pharynx.

PROJECT: C.H.A.N.G.E.
5TH GRADE CURRICULUM
PHYSIOLOGY OF THE EAR
EAR DEFINITION MATCH - ANSWER SHEET

B	1. Pinna	A. Looks like an anvil
D	2. Auricle	B. Another name for the outer ear.
H	3. Auditory Canal	C. Ear drum
C	4. Tympanic Membrane	D. Part of the ear you can see.
E	5. Malleus	E. Looks like a hammer
A	6. Incus	F. A membrane forming the entrance to the inner ear.
J.	7. Stapes	G. Carries sound to the brain.
L	8. Eustachian Tube	H. Part of the outer ear which has tiny hairs which produce wax.
F	9. Oval Window	I. Contains fluid called parolymph and looks like a snail.
I	10. Cochlea	J. Looks like a stirrup.
K	11. Semi Circular Canals	K. Part of the inner ear which aids balance.
G	12. Auditory Nerve	L. Leads from the middle ear to the nasal pharynx.

PROJECT: C.H.A.N.G.E.
FIFTH GRADE CURRICULUM
PHYSIOLOGY OF THE EAR

ACTIVITY:

Book; How We Hear by Judith Fryer

Objective:

Children are able to identify the parts of the ear and their functions.

Materials:

How We Hear by Judith Fryer (Learner Publications Company)

Procedure:

The teacher may read the book to the class or assign it as enrichment reading for those students who would like to learn more about the hearing process. If the students read the book for enrichment, a book report may be assigned. The report should include the title, author, and a brief summary.

PROJECT: C.H.A.N.G.E.
5TH GRADE CURRICULUM
PHYSIOLOGY OF THE EAR

ACTIVITY:

Trace the path of sound from the auricle to the brain.

OBJECTIVE:

Students can name the parts of the ear by which sound travels from the auricle to the brain.

MATERIALS:

1. overhead of the ear
2. Prelabeled ear model worksheet
3. Unlabeled ear model worksheet (See E-5)

PROCEDURE:

Using the ear model overhead trace the parts of the ear by which sound travels to the brain. As the teacher points to each part of the diagram the students should recite the names of 1) auricle 2) external auditory canal 3) tympanic membrane 4) malleus 5) incus 6) stapes 7) oval window 8) cochlea 9) auditory nerve and 10) brain. Students may enjoy trying to list the parts without using the labels.

PROJECT: C.H.A.N.G.E.
5TH GRADE CURRICULUM
PHYSIOLOGY OF THE EAR

ACTIVITY:

Diagrams Of The Left Ear (4)

OBJECTIVE:

The students understand the parts of the ear and it's three major sections.

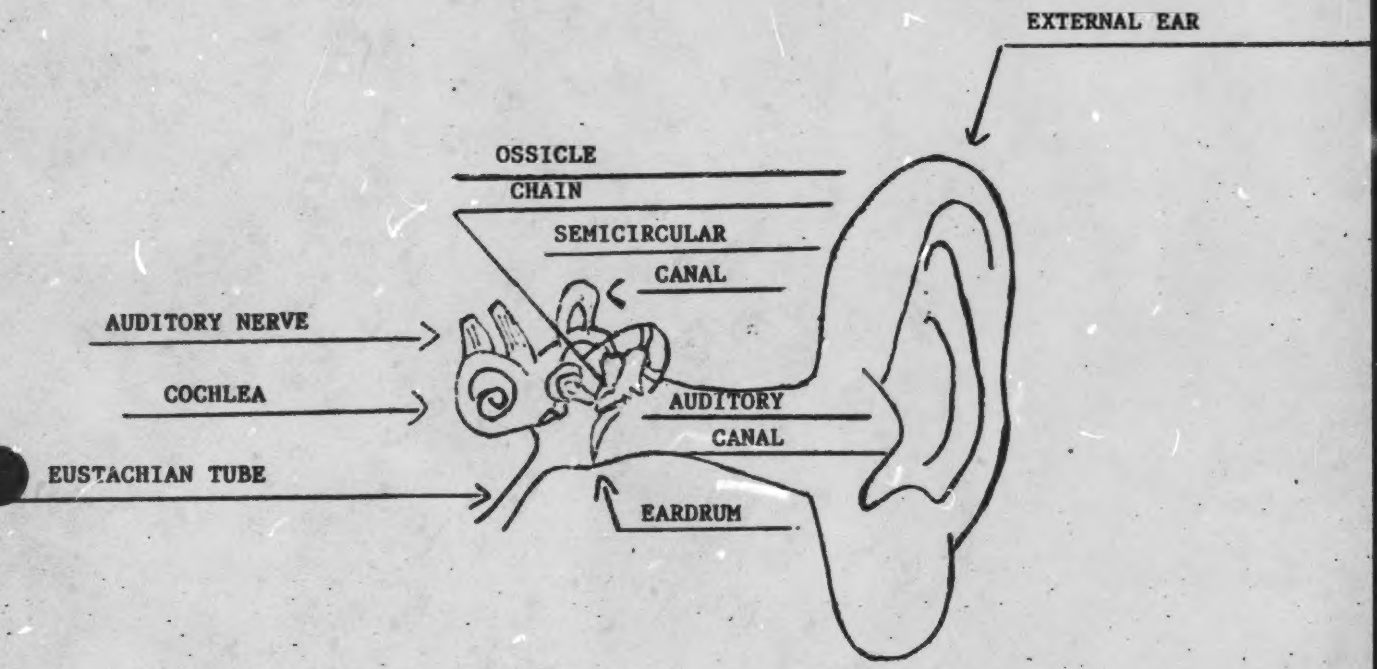
MATERIALS:

Four diagrams of the left ear.

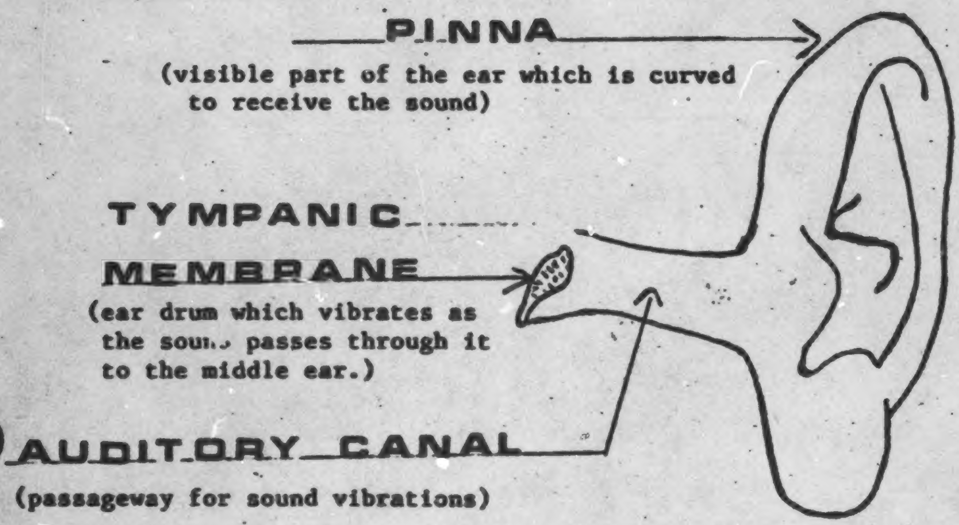
PROCEDURE:

Distribute copies of the diagrams to the students. These diagrams are intended to clarify the parts of the ear. The students should examine the diagrams carefully. They should compare the diagrams of the External, Middle and Inner ear to the diagram of the complete ear. As a follow up activity the students may want to draw and label the diagrams on another sheet of paper.

DIAGRAM OF THE LEFT EAR


EXTERNAL EAR
OSSICLE
CHAIN
SEMICIRCULAR
CANAL
AUDITORY NERVE
COCHLEA
AUDITORY
CANAL
EUSTACHIAN TUBE
EARDRUM

EXTERNAL EAR



PINNA

(visible part of the ear which is curved to receive the sound)

TYMPANIC MEMBRANE

(ear drum which vibrates as the sound passes through it to the middle ear.)

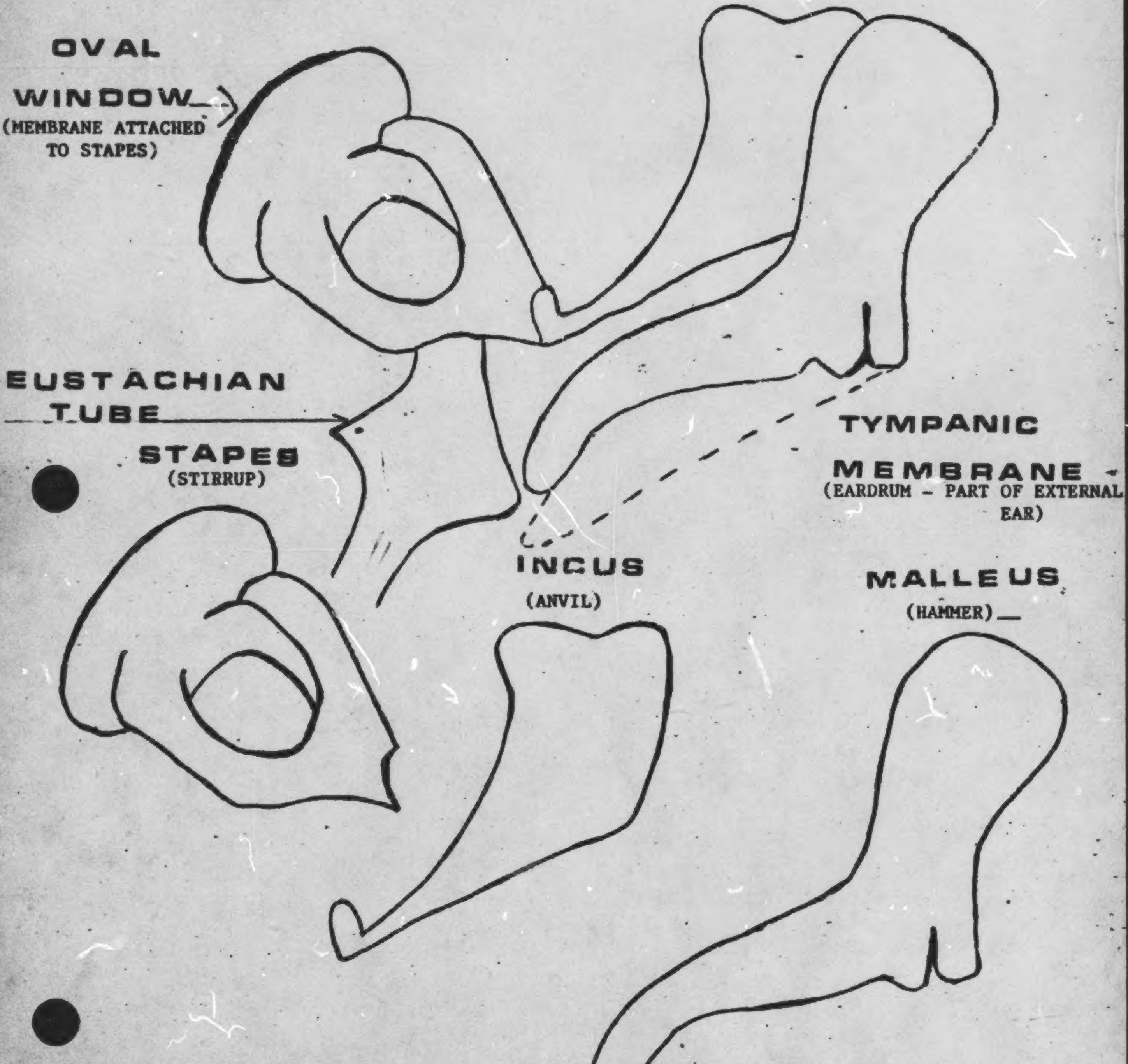
AUDITORY CANAL

(passageway for sound vibrations)

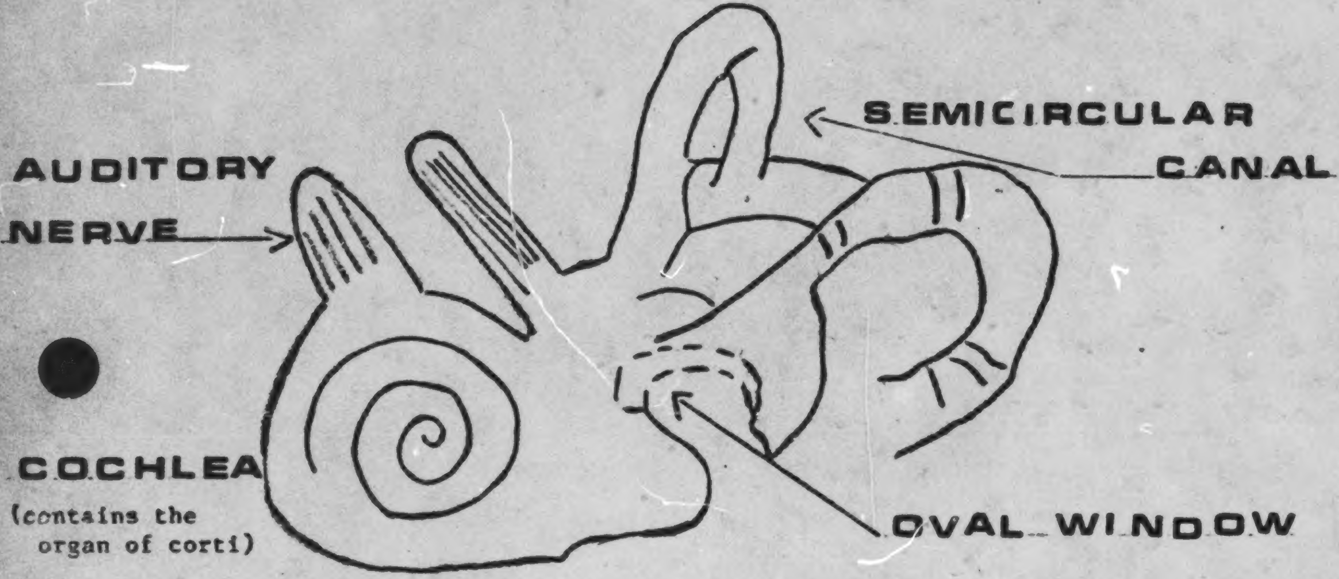
MIDDLE EAR

OSSICLE CHAIN

A chain of bones which helps conduct vibrations through the oval window to the inner ear. These three bones are located in the middle ear with the eustacian tube which leads to the back of the throat.


OVAL WINDOW
(MEMBRANE ATTACHED TO STAPES)
EUSTACHIAN TUBE
STAPES
(STIRRUP)
TYMPANIC MEMBRANE
(EARDRUM - PART OF EXTERNAL EAR)
INCUS
(ANVIL)
MALLEUS
(HAMMER)

INNER EAR


AUDITORY
NERVE
SEMICIRCULAR
CANAL
COCHLEA
(contains the
organ of corti)
OVAL WINDOW

PROJECT: C.H.A.N.G.E.
5TH GRADE CURRICULUM
PHYSIOLOGY OF THE EAR

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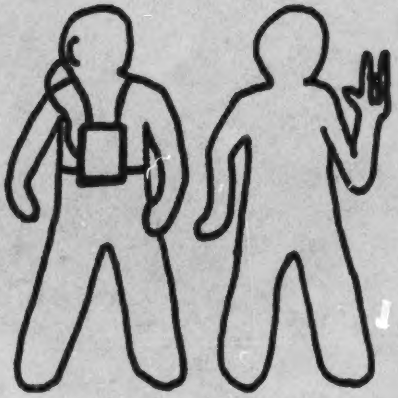
DEAFNESS



INTERMEDIATE LEVEL

PROJECT: C.H.A.N.G.E.
5TH GRADE CURRICULUM
INTRODUCTION: DEAFNESS

This unit attempts to familiarize the students with the types of deafness, some of the causes, and some of the special problems faced by the deaf, physical, social and educational.

In this unit it is hoped that the students will develop a better understanding of the problems facing the deaf student and come to the realization that they share many of the same problems and fears as the normally hearing person.

The objectives and concepts taught in this unit are:

Unit	Objective	Concept
Deafness	The student can define deafness, and identify the types of hearing loss.	A deaf person is one whose sense of hearing is non-functional for the ordinary purpose of life. Hearing alone may not be sufficient for language comprehension. A congenitally deaf person is one who was born deaf. Congenital deafness is usually considered to be the more severe handicap since the child became deaf before he could hear and acquire language. An adventitiously deaf person is one who was born with normal hearing but in whom the sense of hearing became nonfunctional. A hard of hearing person is one in whom the sense of hearing, although defective, is functional with or without a hearing aid. Hearing impaired is a general term indicating some malfunction of the auditory mechanism. Basically there are two types of hearing losses: conductive and sensor-neural. A conductive hearing loss involves some kind of blockage in the middle ear. A conductive hearing loss can quite often be corrected by surgery. A sensori-neural hearing loss implies damage to the nerve fibers which connect the inner ear to the hearing center in the brain. This damage is permanent because damaged nerve fibers do not regenerate or repair themselves; thus surgery will not correct the hearing loss.

UNIT	OBJECTIVE	CONCEPT
Deafness (cont.)	The student can identify some of the causal factors of deafness.	Some causes of a conductive hearing loss are impacted wax, infection in the middle ear, a congenital malformation (such as an absence of the outer ear) and accidents. Some of the causes of a sensorineural hearing loss are accidents which cause damage to the nervous system, heredity, drugs permanent damage due to excessive noise, mother having had rubella or German measles in first trimester of pregnancy, R.H. factor incompatibility at birth, meningitis and some infectious diseases such as mumps.
	The student can identify areas of difficulty, special needs, and ways of dealing with the disability of deafness.	There are several areas of difficulty to be dealt with by the deaf person: A. Communication is difficult due to the inability to hear verbal language. The deaf person is unable to communicate in a normal manner when using a telephone, talking to people directly or participating in groups. B. Education is difficult because of the deaf person's inability to hear the teacher. They often have difficulty with I.Q. and other tests due to difficulties in communication and/or lack of language experiences. C. Certain hazards such as fire (can't hear alarms) and cars are more life threatening to deaf people than to hearing people. D. There are limitations for the deaf person socially and recreationally. The social maturity of the hearing impaired student may often be less than that of their peers.

UNIT	OBJECTIVE	CONCEPT
	The student can identify areas of difficulty, special needs, and ways of dealing with the disability of deafness (cont.)	Deafness is the most disabling of all handicaps. It locks the mind into the body and takes away communication, the path where men's minds are enabled to meet Recreationally, the deaf person is unable to enjoy TV, movies, dancing, certain sports, etc.. E. There are limitations on employment choices for deaf individuals. The hearing impaired person can learn to use special techniques and devices to deal with variou situations. Some of these are: A. Hearing aid - a small machin that is used to amplify sound. B. Sign Language - ASL (America Sign Language) is the typical language deaf people use when conversing among themselves. ASL has a grammatical structure like Chinese (each sign represents an entire concept - not just one word). C. Fingerspelling - or the one hand manual alphabet. Fingerspelling is the use of the manual alphabet to spell words. A knowledge of spelling and grammatical rules is necessary to use this form of communication. The manual alphabet consists of a single hand configuration for each letter of the English alphabet. A benefit of fingerspelling is that any word may be spelled. When dealing with abstract ideas or technica names, this is extremely helpful. D. Manual English - a combination of signs and fingerspellin which adheres closely to grammatical (English) structure.

UNIT	OBJECTIVE	CONCEPT
Deafness (cont.)	The student can identify areas of difficulty, special needs, and ways of dealing with the disability of deafness (cont.)	E. Lipreading (speechreading). This is an acquired skill. It is used to comprehend spoken language by recognizing the meaning of the message by movements of the face, lips, throat muscles, and placement of the tongue of the speaker. F. Total Communication - a mean of receiving and expressing language by using a combination of speech, residual hearing, fingerspelling, and sign language. G. Special mechanisms attached to telephones and T.V.'s. H. Overdevelopment of other senses. I. Special devices for jobs, (computer with print-outs for language, etc.)
Deafness (cont.)	The student recognizes that handicapped (hearing impaired people) are worthwhile individuals.	Hearing impaired people have the same basic needs as people who are not hearing impaired. Hearing impaired people may have difficulty coping with the misconceptions some people have about their handicap.

PROJECT: C.H.A.N.G.E.
5TH GRADE CURRICULUM
DEAFNESS

ACTIVITY:

Deafness Definition Sheet

OBJECTIVES:

The students become familiar with the terminology used in the deafness unit.

MATERIALS:

Deafness definition sheet.

PROCEDURES:

Distribute and read through the Deafness Definition Sheet with the class stopping to discuss any questions the students may have on the material. Have the class return the Deafness Definition Sheet as it is necessary to complete the next activity.

PROJECT: C.H.A.N.G.E.
5TH GRADE CURRICULUM
DEAFNESS DEFINITION SHEET

NAME: ______________________________

Deaf - One whose sense of hearing is non functional for the ordinary purpose of life.

Conductive hearing loss - A hearing loss which occurs from a blockage in the middle ear. This hearing problem can often be corrected by surgery or medication.

Sensorineural loss - A hearing loss due to damage of the nerve fibers which connect the inner ear to the hearing center in the brain. This is a permanent hearing loss and cannot be corrected by surgery.

A Congenitally deaf person - One who was born deaf.

An adventitiously deaf person - One who was born with normal hearing, but who lost it sometime after birth.

A hard of hearing person - One in whom the sense of hearing is not completely gone and who can hear with a hearing aid.

Hearing impaired person - A general term indicating a person with a hearing problem.

Hearing Aid - A small machine used to make sound louder.

Sign language - The typical language deaf people use when conversing among themselves. Each sign represents an entire concept.

Fingerspelling - The use of the one-hand manual alphabet to spell words. There is a sign for each letter of the alphabet.

Manual English - A combination of sign language and fingerspelling.

Speech Reading (lipreading) - A method of recognizing the meaning of a spoken message by studying the movements of the speakers face, lips, throat muscles and tongue placement.

Total Communication - The receiving and sending of messages (language) using a combination of speech, residual hearing, fingerspelling, and sign language.

PROJECT: C.H.A.N.G.E.
5TH GRADE CURRICULUM
DEAFNESS

ACTIVITY:

Deafness Definition Sheet Game

OBJECTIVES:

The student reviews the terminology used in the deafness unit.

MATERIALS:

Deafness Definition Sheet

PROCEDURE:

Choose one child to be score keeper. Duplicate the Deafness Definition Sheet then cut the definitions out and fold them twice. Place folded definitions in a wide mouthed container. Arrange the class in two teams. Allow a person on one team to come up and choose a definition to read to the opposing team. If the opposing team identifies the term correctly then they receive a point. If not, the team giving the definition receives a chance to identify the term. If they define it correctly they receive the point. The game may end when all of the definitions are used or the definitions may be returned to the container and reused if time allows. The teacher then determines when the game ends.

PROJECT: C.H.A.N.G.E.
5TH GRADE CURRICULUM
DEAFNESS

ACTIVITY:

Deaf Wordgram and Deaf Vocabulary List.

OBJECTIVES:

The students learn the terminology used in discussing the topic of deafness.

MATERIALS:

Deaf Wordgram and the Deafness Definition Sheet

PROCEDURE:

Have the children complete the Wordgram. Then using encyclopedias and other reference materials have them complete the Deaf Vocabulary List by filling in the blanks.

ANSWER KEY:

1. Congenitally
2. Adventitiously
3. Conductive
4. Sensorineural
5. Hearing impairment
6. Manual English
7. Deaf person
8. Sign language
9. Fingerspelling
10. Hearing Aid
11. Total Communication

E	A	H	B	A	T	S	N	A	E	A	R	M	O	L	D	O	L	A
G	R	A	H	A	M	P	D	R	C	A	A	E	H	A	F	I	N	H
A	U	D	T	L	S	I	M	S	I	R	Y	T	D	R	S	R	A	E
U	A	G	E	E	D	L	A	N	G	H	S	F	I	N	M	O	R	C
G	R	F	R	M	A	P	S	O	A	E	F	O	D	E	R	S	I	N
N	E	A	U	V	E	T	I	I	L	A	E	U	I	U	D	P	A	E
A	L	E	X	A	N	D	E	R	G	R	A	H	A	M	B	E	L	L
L	E	D	M	L	U	E	A	N	S	I	G	X	E	L	A	L	D	I
N	A	E	O	A	T	R	G	I	H	N	T	D	S	I	T	R	E	S
G	N	I	L	L	E	P	S	R	E	G	N	I	F	I	T	A	B	A
I	D	E	I	D	R	E	T	Y	A	A	T	N	I	D	E	C	E	H
S	I	G	N	T	I	O	T	G	F	I	N	G	R	A	R	P	L	A
A	G	U	G	R	A	M	B	I	A	D	E	A	E	R	Y	L	E	M

DEAF WORDGRAM

EARS
HEARING AID
FINGER SPELLING
SIGN LANGUAGE
BATTERY

EARMOLD
AUDIOGRAM
SILENCE
DEAF
ALEXANDER GRAHAM BELL

E	A	H	B	A	T	S	N	A	E	A	R	M	O	L	D	O	L	A
G	R	A	H	A	M	P	D	R	C	A	A	E	H	A	F	I	N	H
A	U	D	T	L	S	I	M	S	I	R	Y	T	D	R	S	R	A	E
U	A	G	E	E	D	L	A	N	G	H	S	F	I	N	M	O	R	C
G	R	F	R	M	A	P	S	O	A	E	F	O	D	E	R	S	I	N
N	E	A	U	V	E	T	I	I	L	A	E	U	I	U	D	P	A	E
A	L	E	X	A	N	D	E	R	G	R	A	H	A	M	B	E	L	L
L	E	D	M	L	U	E	A	N	S	I	G	X	E	L	A	L	D	I
N	A	E	O	A	T	R	G	I	H	N	T	D	S	I	T	R	E	S
G	N	I	L	L	E	P	S	R	E	G	N	I	F	I	T	A	B	A
I	D	E	I	D	R	E	T	Y	A	A	T	N	I	D	E	C	E	H
S	I	G	N	T	I	O	T	G	F	I	N	G	R	A	R	P	L	A
A	G	U	G	R	A	M	D	I	A	D	E	A	E	R	Y	L	E	M

DEAF WORDGRAM

EARS
HEARING AID
FINGER SPELLING
SIGN LANGUAGE
BATTERY
EARMOLD
AUDIOGRAM
SILENCE
DEAF
ALEXANDER GRAHAM BELL

D-7

PROJECT: C.H.A.N.G.E.
5TH GRADE CURRICULUM
DEAFNESS

NAME:____________________________________

DEAF VOCABULARY LIST

Fill in the blanks with the correct word to complete the definition.

1. A C _ _ _ _ _ _ _ _ _ _ _ _ _ deaf person is one who was born deaf.

2. An A _ _ _ _ _ _ _ _ _ _ _ _ _ _ deaf person is one who was born with normal hearing, but lost it later on in life.

3. A C _ _ _ _ _ _ _ _ _ _ hearing loss involves some kind of blockage in the middle ear. This can sometimes be corrected by surgery.

4. A S _ _ _ _ _ _ _ _ _ _ _ _ _ _ loss is one in which there is damage to the nerve fibers leading from the inner ear to the hearing center in the brain. This cannot be corrected by surgery.

5. H _ _ _ _ _ _ _ I _ _ _ _ _ _ _ _ _ _ is a term indicating some problem with hearing.

6. M _ _ _ _ _ E _ _ _ _ _ _ _ is a combination of sign language and finger spelling.

7. A D _ _ _ P _ _ _ _ _ is one whose sense of hearing is nonfunctional for the ordinary purpose of life.

8. S _ _ _ L _ _ _ _ _ _ _ is the typical language deaf people use when conversing among themselves.

9. F _ _ _ _ _ _ _ _ _ _ _ _ _ _ _ is the use of the manual alphabet to spell words. There is a sign for each letter of the alphabet.

10. A H _ _ _ _ _ _ _ A _ _ is a small machine used to make sound louder.

11. T _ _ _ _ C _ _ _ _ _ _ _ _ _ _ _ _ _ a means of receving and expressing language by using a combination of speech, residual hearing, fingerspelling, and sign language.

PROJECT: C.H.A.N.G.E.
5TH GRADE CURRICULUM
DEAFNESS

ACTIVITY: Game: "Keep Quiet"

OBJECTIVE:

Students learn finger spelling and, therefore, gain understanding of the way the deaf person communicates.

MATERIALS:

Game, "Keep Quiet"
(Kopptronix Co.)

PROCEDURE:

This game is slotted here as an extra activity which may be played by small groups of students. This would be ideal for any students who finish their work early. The instructions are in the box for several games that may be played. Game #1 is not too difficult for 5th grade students and is the preferred version.

PROJECT: C.H.A.N.G.E.
5TH GRADE CURRICULUM
DEAFNESS

ACTIVITY:

Filmstrip and cassette, "Alike We Are" (The deaf child in the regular classroom.)

OBJECTIVE:

To enable the student to learn how a deaf child operates in a normal classroom and to enable the student to understand the special problems faced by the deaf child, both socially and academically.

MATERIALS:

Film and cassette "Alike We Are" (The Deaf Child in the Regular Classroom) (Paramount Communications)

PROCEDURE:

After viewing the filmstrip, have the children write an essay entitled, "If I Lost My Hearing Today." The essays should emphasize what things they would miss being able to do and which things they would now find the most difficult.

PROJECT: C.H.A.N.G.E.
5TH GRADE CURRICULUM
DEAFNESS

ACTIVITY:

Filmstrip and cassette, "Greg".

OBJECTIVE

Children become aware of the special problems and abilities of the deaf person.

MATERIALS:

Filmstrip and cassette "Greg" (Pomfert House)

PROCEDURE:

After viewing the filmstrip, discuss the filmstrip using these questions.

1.) When did Greg become deaf?
2.) Is he completely deaf?
3.) Does Greg attend a regular high school?
4.) Does he participate in the same activities as other kids?
5.) Does he have any problems the normal hearing child doesn't have?
6.) What special techniques does Greg use to help him understand what people are saying?
7.) What can Greg do by lip reading that other kids can't do?
8.) What irritating thing often happens to Greg's hearing aid?
9.) Is Greg the same age as his classmates?
Why not?
Does this bother him?

PROJECT: C.H.A.N.G.E.
5TH GRADE CURRICULUM
DEAFNESS

ACTIVITY:

Using the manual alphabet chart to play a guess-the-word game.

OBJECTIVE:

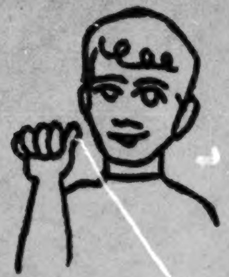
To familiarize the students with one of the methods in which deaf persons communicate.

MATERIALS:

Copy of manual alphabet for each student.

PROCEDURE:

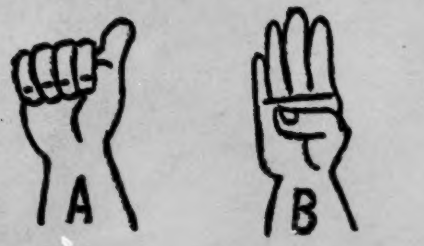
Have each child think of a word. The word can be one of the words from the deaf vocabulary lessons or it can be done with Social Studies, Science, etc. Have the children work out the spelling of the word using the Manual Alphabet. The rest of the class tries to figure out the word. The student who gets the word correctly can then present his or her word.

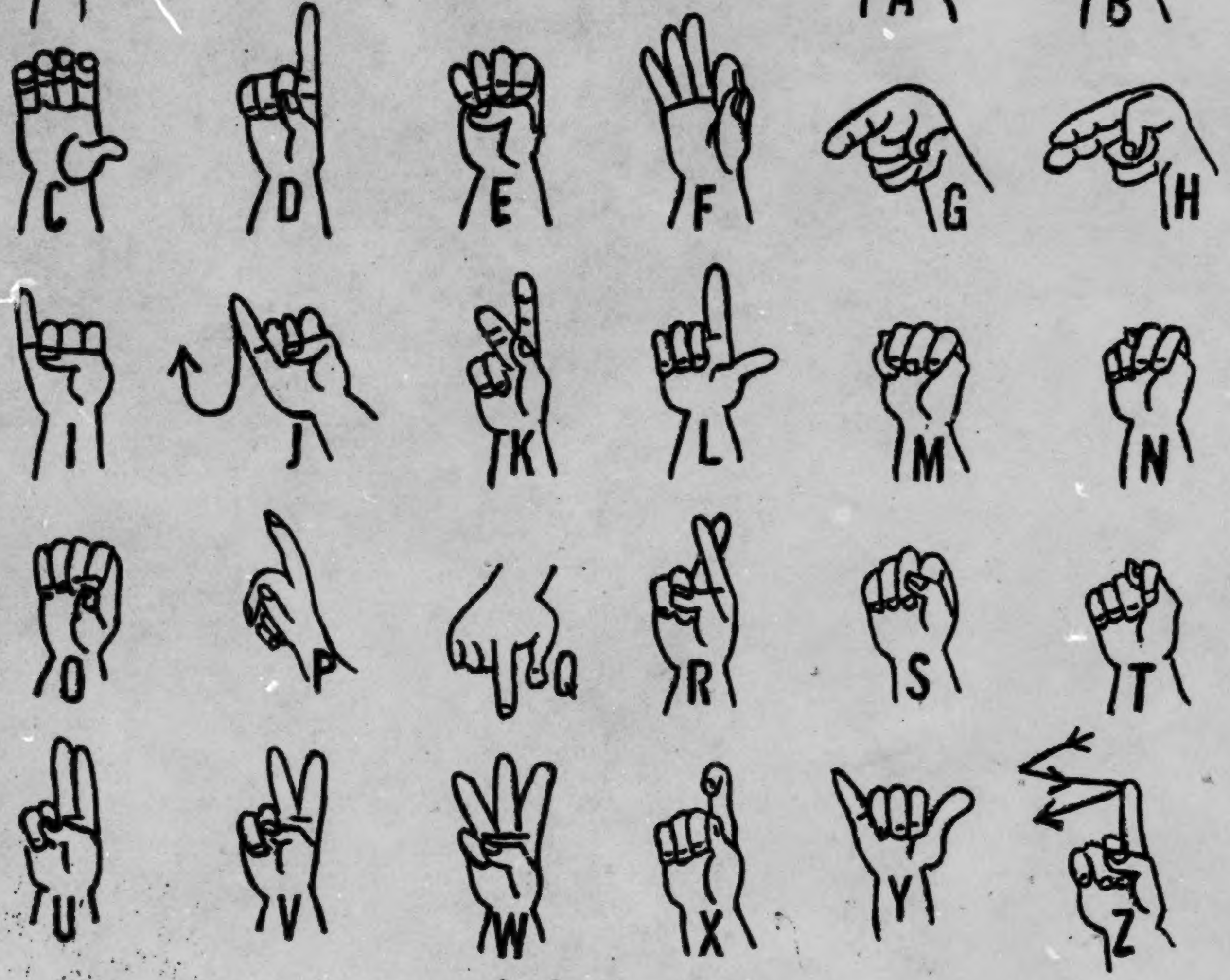


WHEN SPELLING, ARM IS IN NEAR CHEST,

WRIST IS STEADY,

USUALLY ONLY FINGERS MOVING

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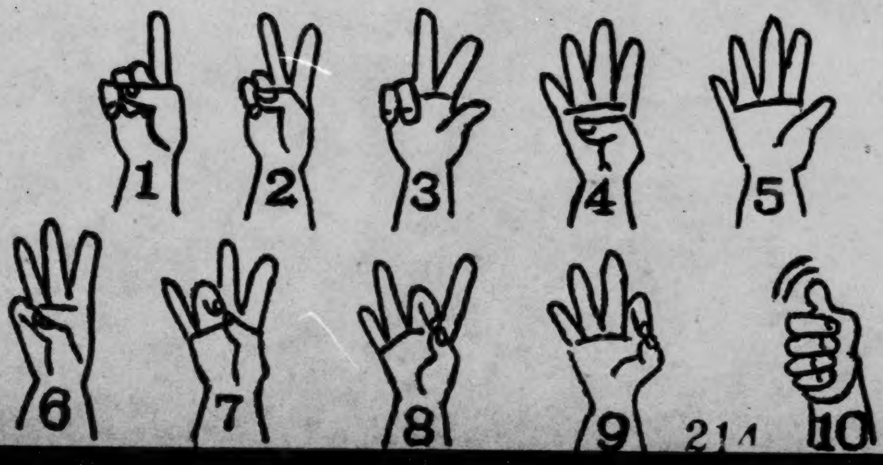
↗ alphabet

numbers ↙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PROJECT: C.H.A.N.G.E.
5TH GRADE CURRICULUM
DEAFNESS

ACTIVITY:

Books: A Dance to Still Music by Barbara Corcoran
Anna's Silent World by Bernard Wolf
The Nothing Place by Eleanor Spence
I'M Deaf, Too by Frank Bowe

OBJECTIVE:

To enable those students whose interest carries them further - to gain insights to deafness and the people it affects.

MATERIALS:

A Dance to Still Music by Barbara Corcoran (Atheneum)
Anna's Silent World by Bernard Wolf (O.B. Lippincott Co.)
The Nothing Place by Eleanor Spence (Harper and Row)
I'M Deaf Too by Frank Bowe and Martin Sternberg
(The National Association of the Deaf)

PROCEDURE:

After the children have completed one or more of the books have them write a brief report. This should include the title, the author, and a brief summary. These reports may be shared with the class.

PROJECT: C.H.A.N.G.E.
5TH GRADE CURRICULUM
DEAFNESS:

ACTIVITY:

Filmstrip and cassette - "Whats Say" and Worksheet #1.

OBJECTIVE:

To enable the students to be more aware of the problems faced by students with hearing problems.

MATERIALS:

Filmstrip and cassette - "Whats Say" (McGraw Hill"
Worksheet 1 - (McGraw Hill)

PROCEDURE:

After viewing the filmstrip, assign the worksheet. Use this sheet as a basis for class discussion.

PROJECT: C.H.A.N.G.E.
5TH GRADE CURRICULUM
DEAFNESS

ACTIVITY:

Filmstrip and cassette - "Karen"

OBJECTIVE:

To enable the students to understand the special problems of a deaf student and to learn what methods are used to help the child overcome her handicap.

MATERIALS:

Filmstrip and cassette "Karen" (Age 8 Deaf) (Workshop Films)

PROCEDURE:

After viewing the film, discuss the film using these questions.

1.) What type of hearing loss does Karen have?
2.) Could Karen hear when she was born?
3.) What problems did her parents have in the beginning?
4.) What is mainstreaming?
5.) What do Karen and her teacher wear? Why?
6.) Where does Karen sit in the classroom?
7.) Does Karen speak as clearly as normal hearing children?
8.) Why doesn't she speak as clearly?
9.) Does she get along with the other children?
10.) What are some of the things Karen learned to do in her special classes?
11.) When and only when was Karen mainstreamed?

PROJECT: C.H.A.N.G.E.
5TH GRADE CURRICULUM
DEAFNESS

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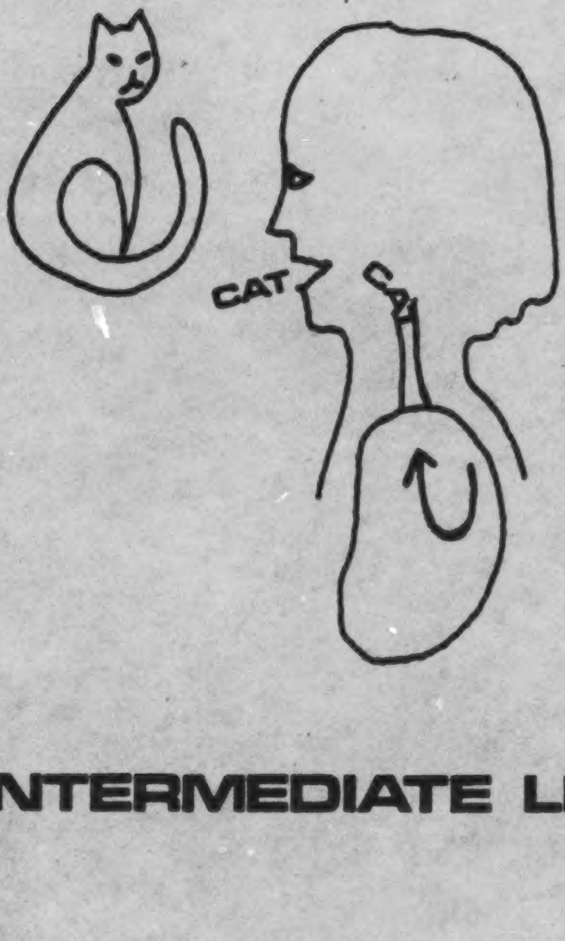
PHYSIOLOGY OF THE ORAL MECHANISM



INTERMEDIATE LEVEL

PROJECT: C.H.A.N.G.E.
5TH GRADE CURRICULUM
INTRODUCTION: PHYSIOLOGY OF THE ORAL MECHANISM

The "Physiology of the Oral Mechanism" is presented as a unit of study at this time as a preparation for the study of speech impairments, which is the next unit. The students will better understand the problems of the speech impaired, if they first understand how the normal speech mechanism operates.

The objectives and concepts to be studied in this unit are:

Unit	Objective	Concept
Physiology of the Oral Mechanism	The student can list the parts of the body used in the production of speech.	The parts of the body involved in speech production are: diaphragm, lungs, larynx, vocal cords, pharynx, soft and hard palate, nose, tongue, teeth, cheeks, and lips.
	The student can describe the function of the body parts involved in speech production.	The function of each part is: Diaphragm - the muscle which moves the lungs up (exhale) and down (inhale) for breathing and speech. Lungs - two organs which exhale air as the source of breathing and speech. Larynx - a stack of cartilages which protect the vocal cords. Vocal Cords - strong bands of tissue which open and close rapidly forcing the air stream into vibration for speech production. Pharynx - the back wall of the throat. Soft palate - the soft fold at the end of the hard palate which is raised or lowered in speech. Hard Palate - the bony roof of the mouth where the tongue makes contact for speech sounds. Nose - the organ used for the filtration of air (breathing), smelling and the sound production of m, n, and ng. Tongue - the flexible muscle used in swallowing, chewing and articulation of speech sounds. Teeth - hard bony, projections in the jaw used for chewing and placement of the tongue for speech sounds.

Unit	Objective	Concept
Physiology of the Oral Mechanism (Cont.)	The student can list the parts of the body used in the production of speech (Cont.)	Cheeks - the sides of the face whose shape can change sound production. Lips - the external structure of the oral cavity whose shape changes affect sound production.

PROJECT: C.H.A.N.G.E.
5TH GRADE CURRICULUM
PHYSIOLOGY OF THE ORAL MECHANISM

ACTIVITY:

Oral Mechanism Definition Sheet.

OBJECTIVE:

The students become familiar with the vocabulary used in the oral mechanism unit.

MATERIALS:

Overhead projector, Oral Mechanism Definition Sheet and Overheads of: larynx, organs of speech, mouth, tongue and pharynx.

PROCEDURE:

Distribute the Oral Mechanism Definition Sheet and then read and discuss this sheet with the class. Put the larynx overhead on the projector and label the parts shown as a group. Repeat this procedure with the other overheads.

ANSWER KEY - LARYNX:

1. epiglottis
2. Hyoid Bone
3. Fat body
4. Thyroid cartilage
5. Trachea

ANSWER KEY-MOUTH, TONGUE AND PHARYNX:

1. soft palate
2. Uvula
3. Posterior wall of the pharynx

ANSWER KEY - ORGANS OF SPEECH:

1. articulators (teeth, palate, lips, jaws, tongue)
2. vocal cords
3. trachea
4. lungs
5. diaphragm

PROJECT: C.H.A.N.G.E.
5TH GRADE CURRICULUM
ORAL MECHANISM DEFINITION SHEET

Diaphragm - the muscle that moves the lungs up (exhale) and down (inhale) for breathing and speech

Lungs - two organs which exhale air as the source of breathing and speech

Larynx - a stack of cartilages which protect the vocal cords

Vocal cords - strong bands of tissue which open and close rapidly forcing, the air stream into vibration for speech production

Pharynx - the back wall of the throat

Soft palate - the soft fold at the end of the hard palate which is raised or lowered in speech

Hard palate - the bony roof of the mouth where the tongue makes contact for speech sounds

Nose - the organ used for the filtration of air (breathing), smelling and the sound production of m, n, and ng

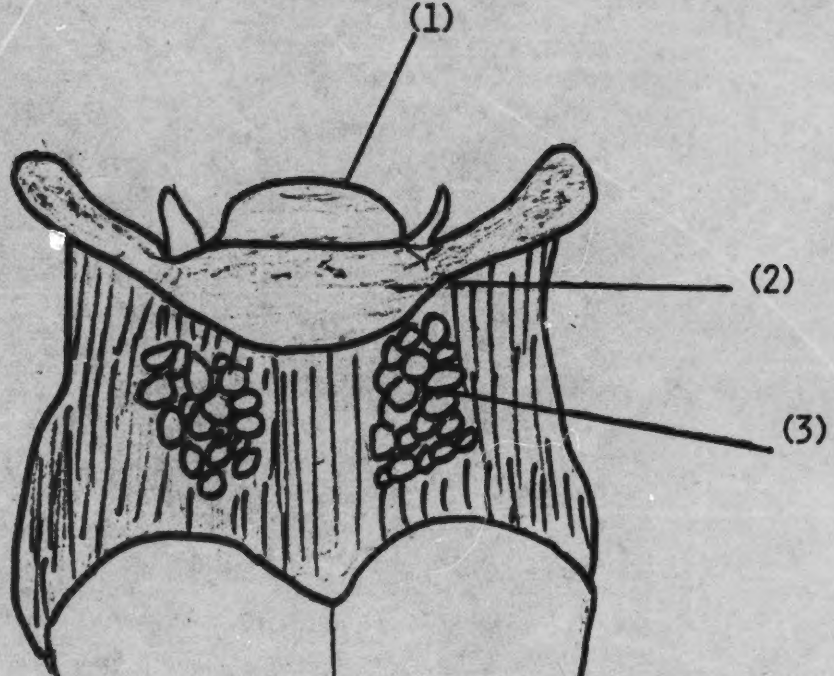
Tongue - the flexible muscle used in swallowing, chewing and articulation of speech sounds

Teeth - hard bony, projections in the jaw used for chewing and placement of the tongue for speech sounds

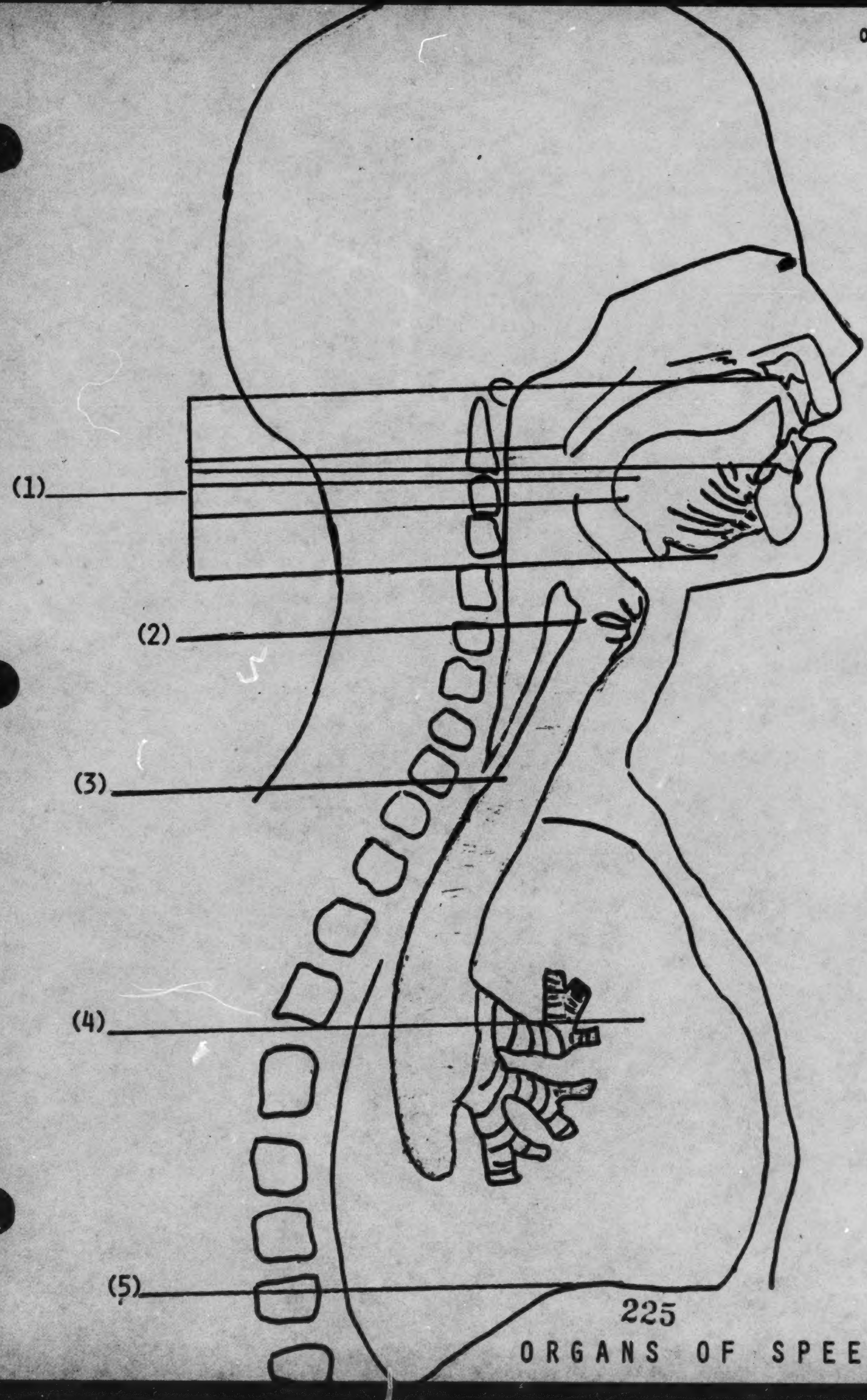
Cheeks - the sides of the face whose shape can change sound production

Lips - the outer structure of the oral cavity whose shape changes affect sound production

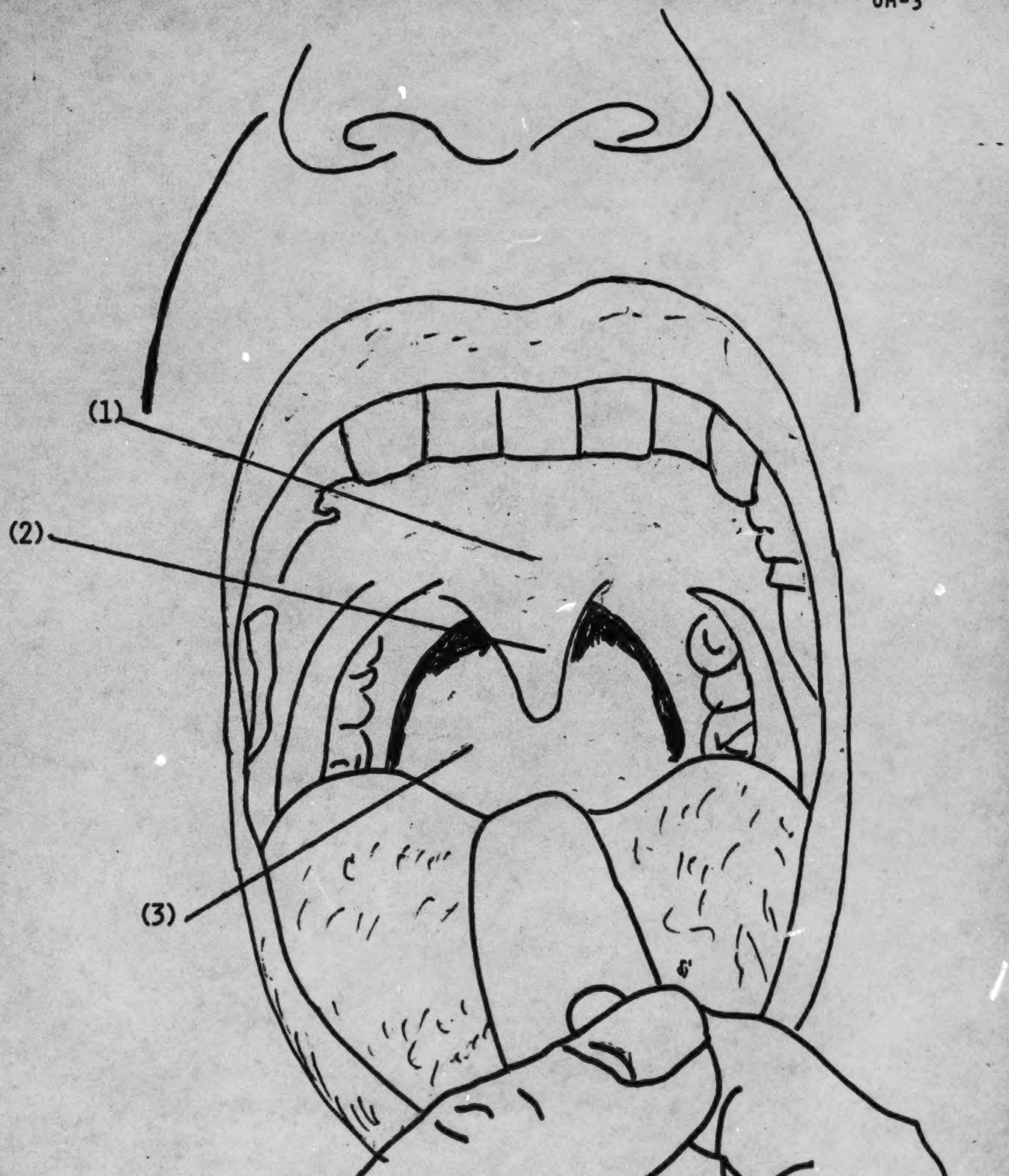
Epiglottis - thin leaf like structure in back of tongue which covers the larynx when a person swallows so that food doesn't enter it when a person is swallowing



LARYNX



ORGANS OF SPEECH



MOUTH, TONGUE AND PHARYNX

PROJECT: C.H.A.N.G.E.
5TH GRADE CURRICULUM
PHYSIOLOGY OF THE ORAL MECHANISM

ACTIVITY:

1) Larynx worksheet
2) Organs of Speech worksheet
3) Mouth, Tongue and Pharynx worksheet

OBJECTIVE:

The students will know the definitions and locations of the speech organs.

MATERIALS:

1) Larynx worksheet
2) Organs
3) Mouth, Tongue and Pharynx worksheet

PROCEDURE:

1) Distribute the three worksheets.
2) Have the students label the parts on the three worksheets.

ANSWER KEY - LARYNX WORKSHEET:

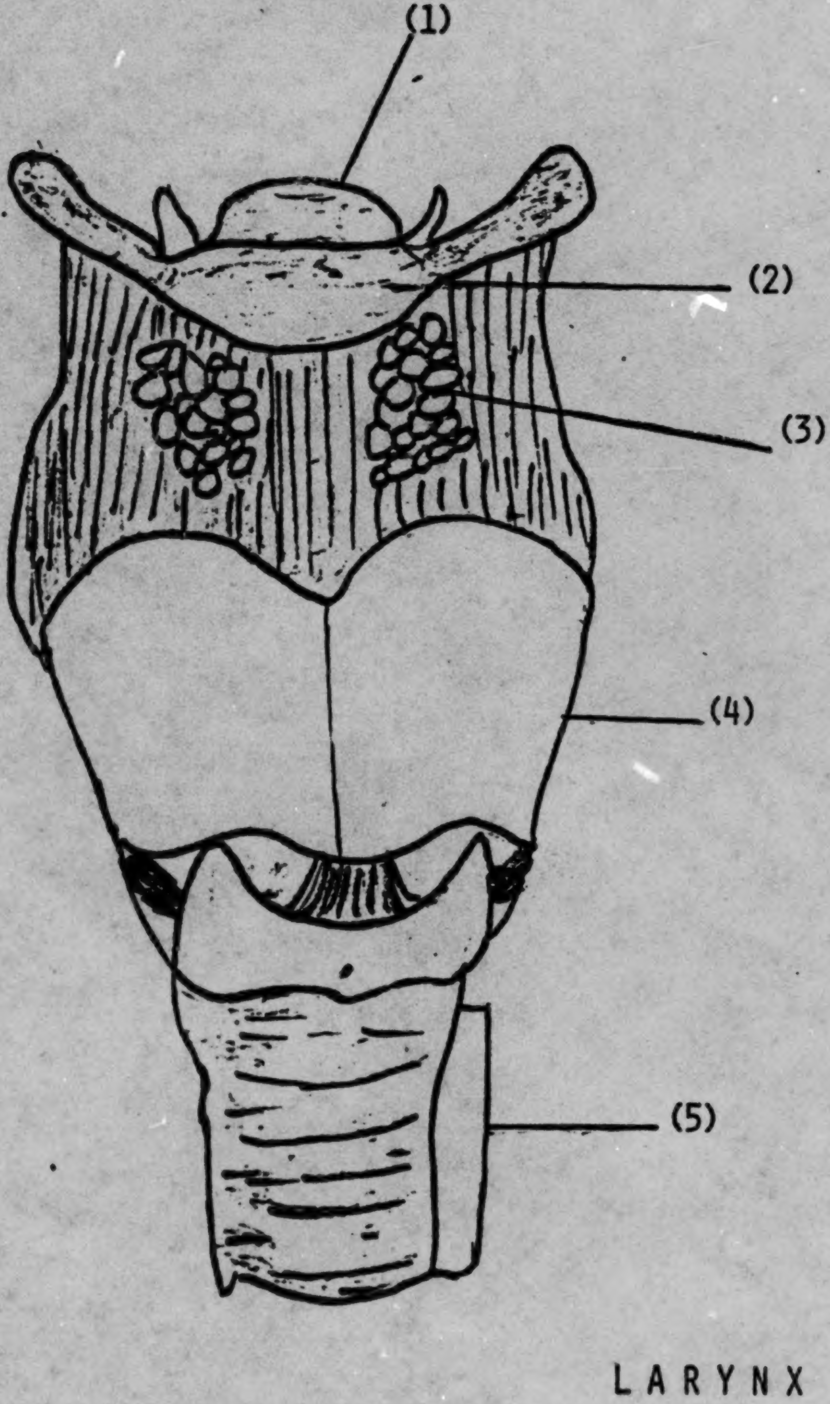
1. epiglottis
2. hyoid bone
3. fat body
4. thyroid cartilage
5. trachea

ANSWER KEY - MOUTH, TONGUE AND PHARYNX WORKSHEET:

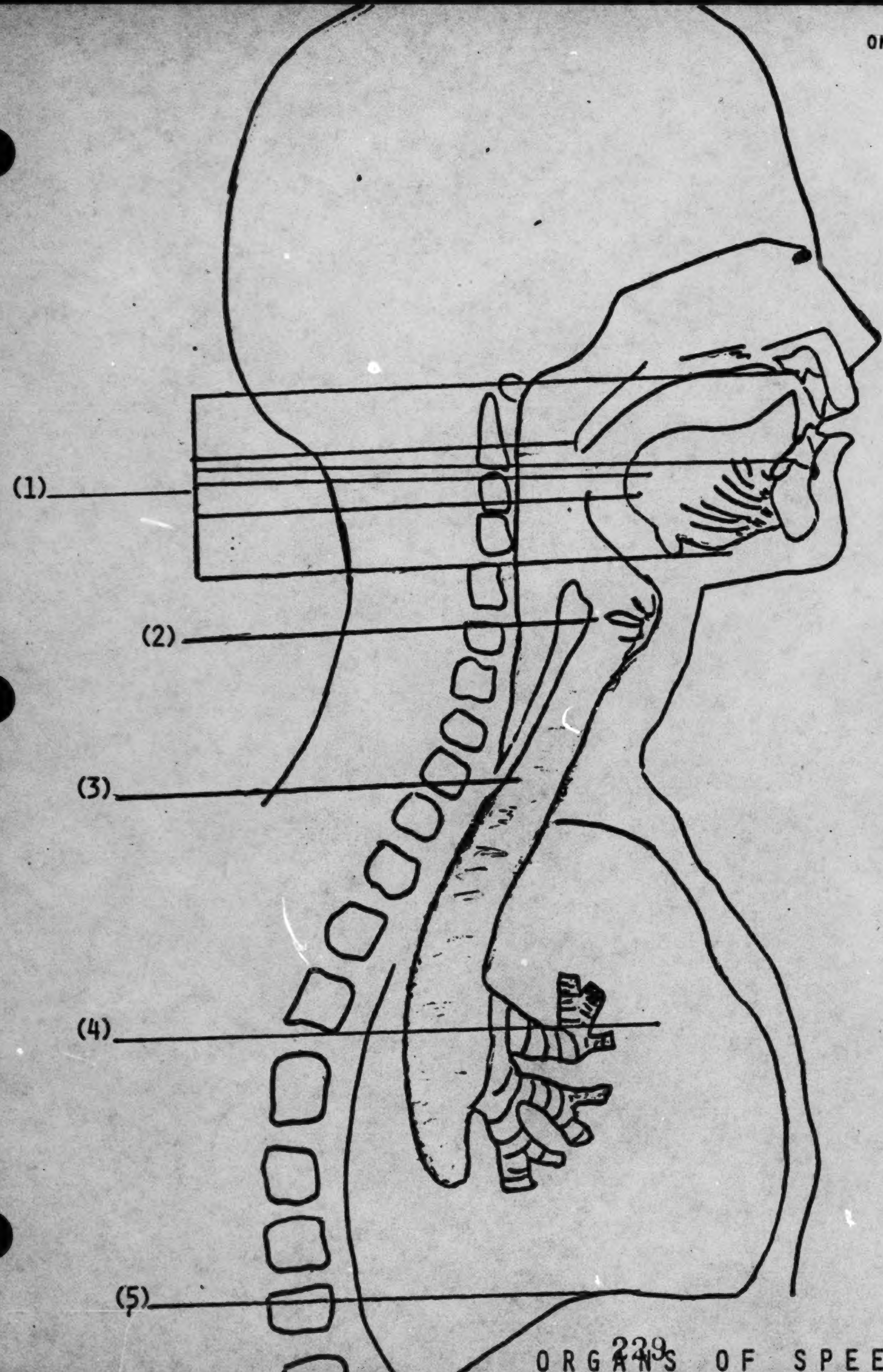
1. soft palate
2. uvula
3. posterior wall of the Pharynx

ANSWER KEY ORGANS OF SPEECH WORKSHEET:

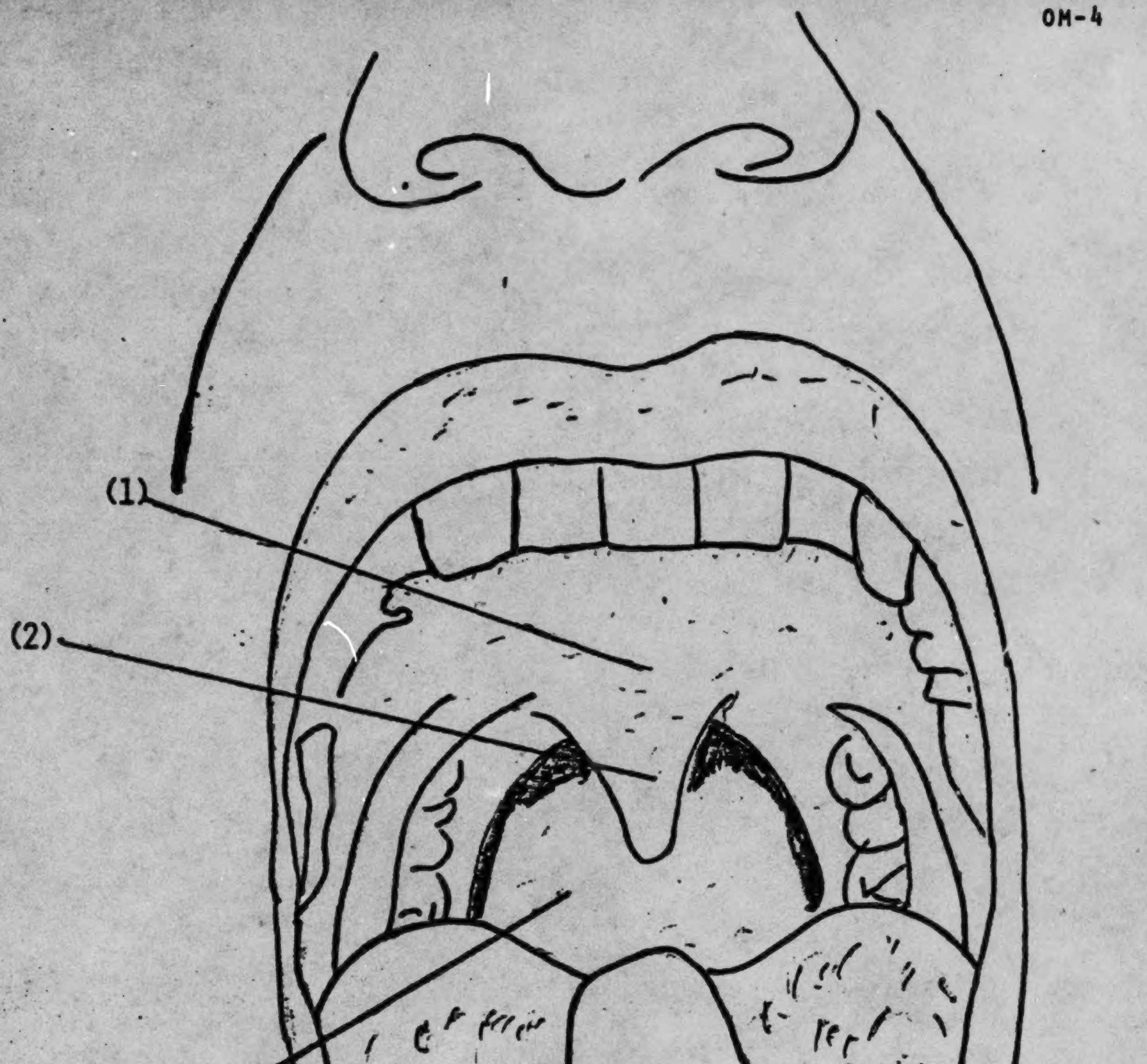
1. articulators (teeth, palate, lips, jaws, tongue)
2. vocal cords
3. trachea
4. lungs
5. diaphragm



LARYNX



ORGANS OF SPEECH



MOUTH, TONGUE AND PHARYNX

PROJECT: C.H.A.N.G.E.
5TH GRADE CURRICULUM
PHYSIOLOGY OF THE ORAL MECHANISM

ORGANS OF SPEECH
CROSSWORD PUZZLE CLUES

ACROSS

1. Strong bands of tissue which open and close rapidly forcing the air stream into vibration for speech production.
2. The bony roof of the mouth where the tongue makes contact for speech sounds.
3. The back wall of the throat.
4. The soft fold at the end of the hard palate which is raised or lowered in speech.
5. The sides of the face whose shape can change sound production.

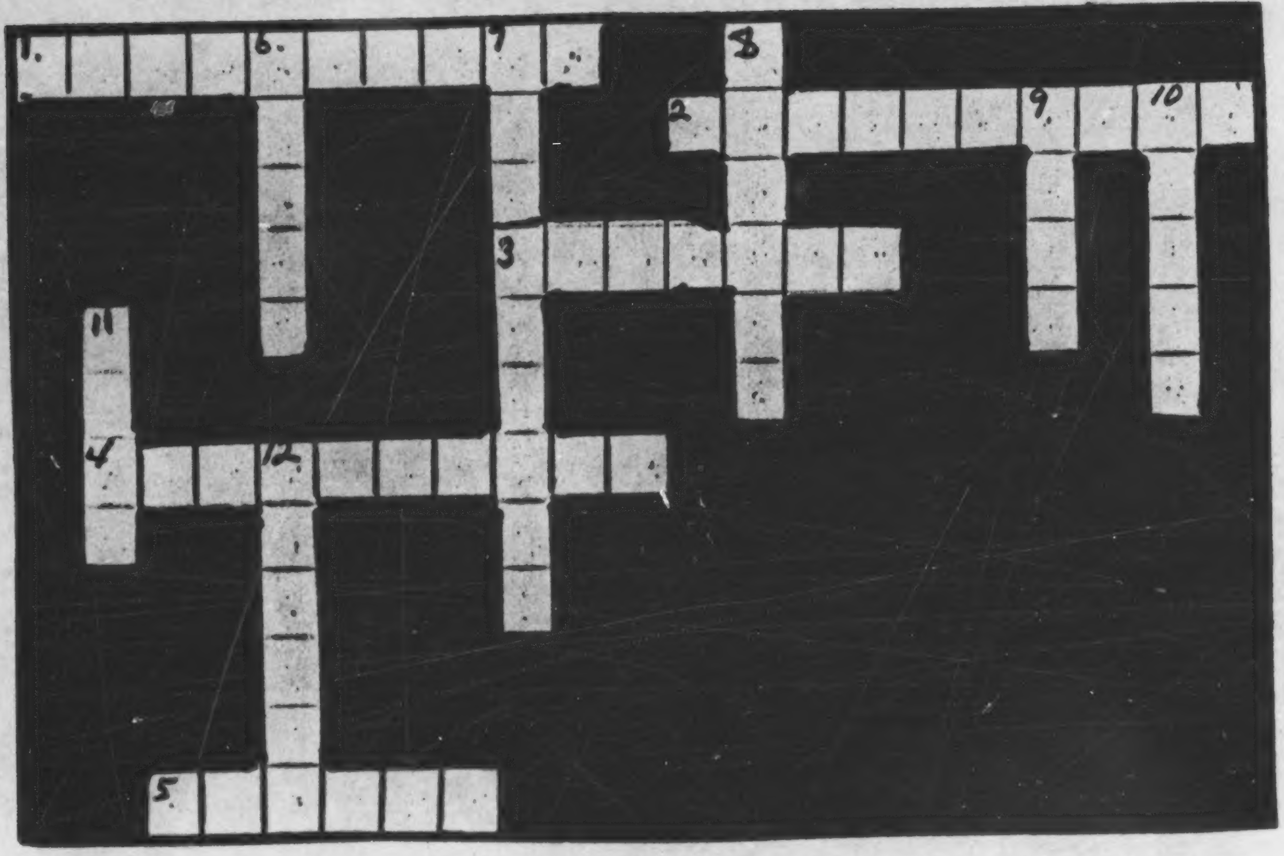
DOWN

6. Two organs which exhale air as the source of breathing and speech.
7. The muscle which moves the lungs up (exhale) and down (inhale) for breathing on speech.
8. A stack of cartilages which protect the vocal cords.
9. The outer structure of the oral cavity whose shape changes affect sound production.
10. Hard, bony projections in the jaw used for chewing and placement of the tongue for speech sounds.
11. The organ used for the filtration of air (breathing), smelling and the sound production of M, N, and NG.
12. The flexible muscle used in swallowing, chewing and articulation of speech sounds.

PROJECT: C.H.A.N.G.E.
5TH GRADE CURRICULUM
PHYSIOLOGY OF THE ORAL MECHANISM

ORGANS OF SPEECH CROSSWORD PUZZLE

pharynx
hard palate
cheeks
diaphragm
lips
nose
lungs
teeth
larynx



tongue
vocal cords
soft palate

OM-5

PROJECT: C.H.A.N.G.E.
5TH GRADE CURRICULUM
PHYSIOLOGY OF THE ORAL MECHANISM

ACTIVITY:

Organs of Speech Crossword Puzzle

OBJECTIVE:

The students become familiar with the various organs of speech and their functions.

MATERIALS:

1. Organs of Speech Crossword Puzzle.
2. Oral Mechanism Definition Sheet.

PROCEDURE:

Review the oral mechanism by going over the oral mechanism definition sheet. Then assign the puzzle. The students may use the Oral Mechanism Definition Sheet to complete the puzzle. After the puzzle is completed, check the answers with the class.

ANSWER KEY:

The "Organs of Speech Crossword Puzzle" answers are:

ACROSS

1. vocal cords
2. hard palate
3. pharynx
4. soft palate
5. cheeks

DOWN

6. lungs
7. diaphragm
8. larynx
9. lips
10. teeth
11. nose
12. tongue

PROJECT: C.H.A.N.G.E.
5TH GRADE CURRICULUM
PHYSIOLOGY OF THE ORAL MECHANISM

ACTIVITY:

Book Report: How We Talk

OBJECTIVE:

Students interested in the oral mechanism can acquire more knowledge about vocal production through the lesson.

MATERIALS:

Book - "HOW WE TALK" by Marylyn Brottman Bennett

PROCEDURE:

After the students have read the book, they may make a short report. The report should contain the title, the author, and a brief summary. These reports may be shared with the class.

PROJECT: C.H.A.N.G.E.
5TH GRADE CURRICULUM
PHYSIOLOGY OF ORAL MECHANISM

ACTIVITY:

Research project on one of the organs of the oral mechanism

OBJECTIVE:

Students write a report stating the location and function of one of the organs of the oral mechanism.

MATERIALS:

Reference materials from the library/learning center

PROCEDURE:

Have students choose one organ of the oral mechanism for research. The student may choose 1) vocal cords 2) pharynx 3) lungs 4) diaphragm or 4) larynx. In their reports the students should include: 1) the location of the organ 2) how it functions in speech production 3) other functions the organ may also have and 5) draw a diagram of the organ.

PROJECT: C.H.A.N.G.E.
5TH GRADE CURRICULUM
PHYSIOLOGY OF THE ORAL MECHANISM

BIBLIOGRAPHY

Bennett, Marilyn Brottman and Sylvia Sanders. How We Talk. Minneapolis, Minnesota: Lerner Publications Company, 1972.

SPEECH IMPAIRMENTS

INTERMEDIATE LEVEL

PROJECT: C.H.A.N.G.E.
5th GRADE CURRICULUM
INTRODUCTION: SPEECH IMPAIRMENTS

One handicap often observed by students is speech impairment. This unit explains the types of speech impairments, the causes and rehabilitation process. Now that the students have studied the oral mechanism, this unit will be meaningful to them.

The objectives and concepts taught in this unit are:

Unit	Objective	Concept
Speech Impairments	The student can define what is meant by the term "speech impairment".	Defective speech is generally regarded as the type of speech that is marked by one or more of the following characteristics: A. It is unintelligible or indistinct. B. It draws attention to itself because it is conspicuous in its difference from the usual. C. It lacks ease, clarity and fluency. D. It interferes with communication. E. It hinders normal social adjustment. A speech impairment can exist together with any other type of handicap and is commonly found with certain types (mental retardation, cerebral palsy, and deafness).
	The student can identify the types of speech disorders and their causes.	There are four basic forms of defective speech: A. Articulation disorder. B. Voice disorders. C. Stuttering. D. Communication and language disorders. An articulation disorder is an impairment of a child's ability to produce speech sounds correctly. Articulation disorders are the most common form of defective speech among school age children. There are three types of articulation disorders:

Unit	Objective	Concept
Speech Impairments (Cont.)	The student can identify the types of speech disorders and their causes (Cont.)	A functional disorder occurs when the child has the physical capability of correctly producing the sound but doesn't do so. The most common functional causes are poor speech models (if a sibling or parent has an articulation disorder, the child may copy this speech pattern rather than learn to produce sounds correctly), or poor speech production habits (some children misarticulate sounds when they are very young and continue to use this improper production). A voice disorder is any pitch, intensity or quality characteristic of the voice that is atypical for the speaker's age or sex. A low husky voice would be atypical in a young child but typical for an adult male. There are three basic types of voice disorders: A. Respiration problems - Disorders resulting from abnormal breathing patterns during speech production. B. Phonation problems - Usually the result of laryngeal (larynx) problems, (hoarseness, monotone, inappropriate pitch). C. Resonance problems - Problems in the oral or nasal cavity cause impaired sound quality (nasal or denasal voice). The causes of voice disorders can be either organic.(growths on the vocal folds, tumors, vocal nodules, polyps, cleft palate, hearing loss, cancer, emphysema, severe allergies, asthma, etc.) or functional. Stuttering is a disorder characterized by behaviors which interfere with forward moving speech and are considered abnormal by the listener.

Unit	Objective	Concept
Speech Impairments (Cont.)	The student can identify the types of speech disorders and their causes (Cont.)	Stuttering may be the result of stoppages (production of a repeated initial sound - I can't t-t-t-t-t-t-talk now) hesitations (the use of fillers in a sentence or a long inappropriate pause in speech production - you - uh-uh-uh-uh-want to uh uh uh uh to the uh uh uh show?) repetitions (repeated production of the first syllable of a word - see the da, da, da, dog) and prolongations (fixation on a sound or syllable for a long period of time - where is the pa-a-a-a-a-a-person?) The underlying cause of stuttering is still being debated. It is felt that possible causes may be coordination or timing problems, phonation problems, emotional problems. Language and communication disorders are characterized by problems in associating and utilizing words in a meaningful manner. Difficulties in this category would include the inability to understand or use a wide vocabulary, improper grammatical structure, inability to respond appropriately to questions, etc.. The cause of a language disorder may be either functional or organic. Aphasia, which is a type of language disorder is a condition in which there is an impairment of the ability to use or understand oral language. This condition may be the result of a "C.V.A." (cerebral vascular accident-stroke) in which a lesion in the brain has caused interference in the language process either receptively or expressively. A laryngectomy (an operation during which parts of or the entire larynx is removed) may also cause a communication disorder because the individual must relearn how to speak in a new manner using either esophageal speech or an artificial larynx.

PROJECT: C.H.A.N.G.E.
5TH GRADE CURRICULUM
SPEECH IMPAIRMENTS

Unit	Objective	Concept
Speech Impairments (Cont.)	The student can identify appropriate remediation techniques used by speech pathologists for the various types of speech impairments.	To remediate articulation disorders the individual must learn to achieve proper or complete production of the sound with which they are having difficulty. This is done through the practice of various oral exercises and stimulation of the oral mechanism (teaching proper tongue exercises). Emphasis is also placed on the development of adequate auditory discrimination so that the individual can determine if they are producing the correct sound. The remediation of voice disorders may involve allowing for a period of rest for the oral mechanism followed by the learning of proper breathing during speech production. Surgery may be required in the case of some phonation and resonance problems and in other cases prosthetic devices may be used to correct resonance problems. In working with stuttering problems, the therapist strives to remove any tension,and provide for a relaxed environment. Remediation involves working on breathing, timing, and rhythm. When emotional problems are indicated as the underlying cause of stuttering therapy,to alleviate these is also undertaken. Remediation of language disorders involves vocabulary enrichment and development of correct syntax comprehension, and expressive abilities. A laryngectomy must be retaught to speak using either esophageal speech or an artificial larynx.

PROJECT: C.H.A.N.G.E.
5TH GRADE CURRICULUM
SPEECH IMPAIRMENTS

Unit	Objective	Concept
Speech Impairments (Cont.)	The student can identify the types of speech disorders and their causes (Cont.)	A. Omissions - A sound is omitted in all or some words, phrases or sentences (all the L sounds may be omitted - pay for play). B. Substitutions - One sound is produced for another sound (substituting the w for an r - wed for red). C. Production of an approximated sound - A sound close to the desired sound (slushy s, z, sh). Articulation disorders are caused by either organic or functional problems in the sound production system. An organically caused disorder results from the child being physically unable to produce the sound. There are several organic causes: 1. Hearing loss - A child who cannot hear himself or others producing certain sounds will have difficulty producing these sounds correctly. 2. Cleft lip and palate - This condition involves an incomplete closure of the midline of the lip and roof of the mouth. 3. Cerebral Palsy - With this condition the muscular movement of the tongue and lips may be impaired, making it difficult to produce certain sounds. 4. Dental abnormalities - Severe teeth or jaw closure problems can lead to difficulty in the pronunciation or sounds.

PROJECT: C.H.A.N.G.E.
5TH GRADE CURRICULUM
SPEECH IMPAIRMENTS

ACTIVITY:

Lecture on Speech Impairments

OBJECTIVE:

Student gains knowledge of the causes, types, and remediation procedures for speech impairments.

MATERIALS:

Lecture on Speech Impairments (Note: Each student should have a copy of the lecture.)

PROCEDURE:

Read the lecture on Speech Impairments with the students. Go over slowly, pausing to clarify terms or to answer student questions. Follow up by a discussion using the following questions. (Note: Collect the lecture from the students because it will be used again in the next lesson.)

QUESTIONS:

1. How does one recognize a person with a speech impairment?
2. List the causes of speech impairments.
3. What are some steps a speech therapist might use to help a person with a speech impairment.
4. List some physical causes of speech impairments.
5. List some types of speech impairments and give some examples of each.

LECTURE ON SPEECH IMPAIRMENTS

Another name for speech impairment is defective speech. This is the type of speech that is marked by 1) Speech that is unintelligable or indistinct. 2) Speech that draws attention to itself because it is conspicuous in its difference from the usual. 3) Speech which lacks ease, clarity, and fluency. 4) Speech which interferes with communication and 5) Speech which hinders normal social adjustment. A speech impairment can exist together with any other type of handicap and is commonly found with certain types such as mental retardation, cerebral palsy, and deafness.

There are four basic forms of speech defect. They are: 1) articulation disorders 2) voice disorders 3) stuttering 4) communication and language disorders.

An articulation disorder is an impairment of a person's ability to produce speech sounds correctly. This is the most common form of defective speech among school age children. There are three types of articulation disorders.

One type of articulation disorder is a functional disorder. This occurs when the child has the physical capability of correctly producing the sound but doesn't do so. This occurs most when a childs brothers, sisters, or parents do not produce the sound correctly. The child may copy this speech pattern rather than learning to produce the sound correctly. Sometimes, children reproduce the sound or sounds incorrectly when they are very young and simply continues to do so.

The second form of speech defect is a voice disorder. This occurs when the person's pitch, intensity, or quality of voice is not normal for the speakers age or sex. For example, a low husky voice would not usually be found in a young child, but would be normal for an adult male. There are three main types of voice disorders: 1) Respiration problems which are disorders which result from breathing patterns during speech which are not normal. 2) Phonation problems which are usually the result of laryngeal (larynx) problems. Some examples of this might be hoarseness, monotone, or too high or too low of a pitch. 3) Resonance problems which are problems in the oral or nasal cavity which cause impaired sound quality such as a nasal voice. The causes of voice disorders can be either growths on the vocal folds, tumors, vocal modules or polyps, a cleft palate, a hearing loss, cancer, emphysema, severe allergies, asthma, or functional which means there is no physical cause.

The third voice disorder is stuttering. This is characterized by behaviors which interfere with the forward moving of speech, and are considered not normal by the listener. Stuttering may be the result of stoppages such as the production of a repeated initial sound. An example of this might be - I can't -t-t-t-t-t talk now. It might also be the result of hesitations which could be the use of fillers in a sentence; or a long inappropriate pause in speech production. For example - you - uh - uh - uh - uh - want to uh - uh - uh - uh - go to the uh - uh - uh - uh - uh - show? Another kind might be repeated production of the first syllable of a word. An example of this might be - See the da - da-- da - dog. Another kind of stuttering might be prolongations. An example of this might be - Where is the pa - a - a - a - a - person? The cause of stuttering is still not completely understood. It is felt that some possible causes may be coordination or timing problems, phonation problems, and emotional problems.

The fourth type of voice disorder are language and communication disorders. A person may have trouble associating and using words in a meaningful way. Some problems would include the inability to understand or use a wide vocabulary, improper grammatical structure, or the inability to respond appropriately to questions. The causes of language and communication disorders may be either functional or organic. Aphasia which is one type of language disorder is a condition in which there is an impairment of the ability to use or understand oral language. This can be the result of a cerebral vascular accident, another name for a stroke. People who have had a laryngectomy, which is an operation in which parts or the entire larynx is removed may also have a communication disorder because this person must relearn how to speak using either esophogeal speech or an artificial larynx. Esophageal speech is speech produced by belching up air.

In order to help people with speech impairments improve their speech, a variety of techniques are used. The speech pathologist may have a person with articulation disorders practice various oral exercises such as tongue exercises, distinguishing between certain sounds so that they can determine if they are producing the correct sound.

To help a person with a voice disorder a speech therapist may recommend a person rest their oral mechanism and then begin proper breathing exercises during speech production. Some people may need surgery when there are phonation and resonance problems. In some cases, a person with resonance problems may need a prosthetic device to correct the problem.

When a speech therapist works with stuttering problems they try first to remove tension and provide a relaxed environment. They work with breathing, timing, and rhythm. People with emotional problems may need therapy before they can be helped.

When working with people with communication and language disorders, a speech therapist will use vocabulary enrichment and development of correct syntax, (English Grammar) comprehension activities, and work on the ability of the person to express themselves more fully. A person who has had a laryngectomy must be taught to talk all over again using either esophogeal speech or an artificial larynx.

There are three main types of speech disorders. They are: 1) Omissions - This occurs when a sound is left out in all or some words, phrases, or sentences. For example, all L sounds may be left out as in saying, "pay for play." 2) Substitutions - This occurs when one sound is made for another sound as when a person substitutes a W for an R sound. An example might be when the person says, "wed for red." 3) Production of an approximated sound. This occurs when a sound close to the desired sound is made as a slushy s, z, or sh. This can be caused by organic or functional problems in the sound production system. An organic disorder results from the person being physically unable to produce the sound.

There are four organic causes of speech disorders. They are: 1) a hearing loss - This occurs when the person is unable to hear themselves or others producing certain sounds. Because of this they have trouble producing these sounds correctly. 2) Cleft palate and lip - This condition involves an incomplete closure of the midline of the lip and roof of the mouth. 3) Cerebral Palsy - With this condition, a person may have difficulty with the muscular movement of the tongue and lips, thus making it difficult to produce certain sounds. 4) Dental abnormalities - With this condition a person may not be able to close the teeth and jaws correctly which will make it difficult to pronounce words and certain sounds.

We have now completed a study of the major problems, causes, and ways of correcting speech defects. It is important to consider the feelings and needs of persons with those problems. They are different, but so are all of us, and we are actually all more alike than different. For we all have the same basic needs such as love, security, belonging, and achieving one's potential.

PROJECT: C.H.A.N.G.E.
5TH GRADE CURRICULUM
SPEECH IMPAIRMENTS

ACTIVITY:

Speech Impairments Match

OBJECTIVE:

Students know terms and definitions used in a discussion of speech impairments.

MATERIALS:

1) Speech Impairment Match

2) Copy of Lecture on Speech Impairments for each student.

PROCEDURE:

Distribute the worksheet and a copy of the lecture and allow students to complete the worksheet using the lecture to research the answers. As a follow-up, correct the worksheet with the class.

ANSWER KEY:

SPEECH IMPAIRMENT

SPEECH IMPAIRMENTS MATCH

NAME____

Match the letters on the right with the numbers on the left to spell out another word for speaking difficulties.

___ 1. articulation disorder	E. a disorder characterized by behavior which interferes with forward moving speech and is considered not normal by the listener.
___ 2. voice disorder	A. usually this difficulty results from problems with the larynx
___ 3. stuttering	H. a person with this problem has incomplete closure of the midline of the lips and roof of the mouth
___ 4. communication and language disorders	M. highness of lowness of the sound
___ 5. hearing loss	I. a person with this disease has difficulty with the muscular movement of the tongue and lips
___ 6. cleft lip and palate	C. a person with this problem may not be able to hear himself or others and therefore has difficulty producing certain sounds
___ 7. cerebral palsy	I. difficulty results from problems in the nasal or oral cavity which causes impaired sound quality
___ 8. dental abnormalities	E. stuttering may result from this
___ 9. respiration problems	S. an impairment of the person's ability to produce speech sounds correctly
___10. phonation problems	T. an operation in which part or all of the larynx is removed
___11. resonance problems	M. a person with this problem may not be able to attain correct closure of the teeth or jaws
___12. speech impairment	E. are characterized by problems in associating and using words in a meaningful manner
___13. pitch	N. an impairment of the ability to use or understand oral language

___14. stoppages

___15. aphasia

___16. laryngectomy

___17. esophageal speech

P. a disorder resulting from abnormal breathing patterns

R. faulty speech

S. a method of speaking in which the person belches up air and is able to produce speech

P. is any pitch intensity or quality charasteristic of the voice that is not normal for the speakers age or sex

PROJECT: C.H.A.N.G.E.
5TH GRADE CURRICULUM
SPEECH IMPAIRMENTS

ACTIVITY:

Filmstrip: "Hearing and Speech Impairments."

OBJECTIVE:

Students know how a hearing loss can cause a speech impairment and understand the special problems of a child with a hearing loss caused by speech impairment.

MATERIALS:

Filmstrip and cassette: "Hearing and Speech Impairments" by Stanfield Associates and Woolly Bear Productions.

PROCEDURES:

After viewing the filmstrip, discuss the film with the following questions.

"Hello Everybody!" "Hearing and Speech Impairment" Stanfield Associates and Woolly Bear Productions.

1. What are some reasons for not being able to hear?
2. What problem does Danny have besides his hearing problem?
3. What aids does Danny use to help him understand what is going on?
4. What does a speech therapist do?
5. What are some causes of speech impairments?
6. What shouldn't you do to a person with a speech impairment?
7. What are some of the sounds he practices?
8. What particular things does Danny have to watch to learn to make sounds?
9. What other forms of communicating does Danny learn besides speech?

PROJECT: C.H.A.N.G.E.
5TH GRADE CURRICULUM
SPEECH IMPAIRMENTS

ACTIVITY:

Book Report: Glue Fingers by Matt Christopher

OBJECTIVE:

For students to gain further insights into the special problems of a child with a speech defect. (Note: Especially good for slow readers).

MATERIALS:

Book: Glue Fingers by Matt Christopher (Little, Brown & Company, Boston, Toronto)

PROCEDURE:

After students have completed the book, they should be encouraged to write a report. The report should include the title, author, and a brief summary. The book reports can be shared with the class.

PROJECT: C.H.A.N.G.E.
5TH GRADE CURRICULUM
SPEECH IMPAIRMENTS

ACTIVITY:

1. Pamphlet: "About Speech and Hearing Problems"

2. Worksheet: "About Speech and Hearing Problems"

OBJECTIVES:

The children understand the relationship between speech and hearing. Also, the problems associated with speech and hearing impairments are studied.

MATERIALS:

1. Pamphlet: "About Speech and Hearing Problems" (A Scriptographic Booklet by Channing L. Bete Co., Inc., 1973)

2. "About Speech and Hearing Problems" (worksheet)

PROCEDURE:

Read the pamphlet with the students. Distribute the worksheet. Students may use the pamphlets to complete the worksheet. After the students complete the worksheet, correct and discuss the answers with the class.

PROJECT: C.H.A.N.G.E.
5TH GRADE CURRICULUM
SPEECH IMPAIRMENTS
ABOUT SPEECH AND HEARING PROBLEMS

NAME ______________________________

1. Give the definition of a speech and hearing problem. ____________

2. List the six speech and language problems.
   1. ____________
   2. ____________
   3. ____________
   4. ____________
   5. ____________
   6. ____________

3. List four causes of speech and language problems.
   1. ____________
   2. ____________
   3. ____________
   4. ____________

4. List three types of hearing losses.
   1. ____________
   2. ____________
   3. ____________

5. List four causes of hearing loss.
   1. ____________
   2. ____________
   3. ____________
   4. ____________

6. List five places in which help is available for speech and hearing problems.

1. ______________________________
2. ______________________________
3. ______________________________
4. ______________________________
5. ______________________________

7. List three professions which help people overcome speech and hearing problems.

1. ______________________________
2. ______________________________
3. ______________________________

8. List the three broad areas which employ speech/language pathologists and audiologists.

1. ______________________________
2. ______________________________
3. ______________________________

PROJECT: C.H.A.N.G.E.
5TH GRADE CURRICULUM
SPEECH IMPAIRMENTS
ABOUT SPEECH AND HEARING PROBLEMS

ANSWER KEY

1. Give the definition of a speech and hearing problem. a speech and hearing problem is a disorder or defect that makes it difficult for a person to have people understand what he is trying to say or for him to understand what other people are saying.

2. List the six speech and language problems.
    1. aphasia
    2. irregularities of facial structure including cleft palate
    3. stuttering
    4. voice disorders
    5. misarticulation
    6. language learning disorders

3. List four causes of speech and language problems.
    1. structural
    2. muscle control
    3. poor hearing
    4. brain damage

4. List three types of hearing losses.
    1. conductive
    2. sensory-neural
    3. mixed

5. List four causes of hearing loss.
    1. heredity
    2. birth defects
    3. disease
    4. accident or noise

6. List five places in which help is available for speech and hearing problems.

   1. clinics
   2. hospitals
   3. public schools
   4. private practices
   5. state health

7. List three professions which help people overcome speech and hearing problems.

   1. speech-language pathologist
   2. audiologist
   3. otolaryngologist

8. List the three broad areas which employ speech/language pathologists and audiologists.

   1. clinical practice
   2. research
   3. education and administration

PROJECT: C.H.A.N.G.E.
5TH GRADE CURRICULUM
SPEECH IMPAIRMENTS

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ABOUT THE STAFF

STAFF:

Director	Donald Martin
Coordinator	Sherry Smith
Assistant Coordinator	Alan Balter
Medical Consultant	LaVerne Galzin
Media Consultant	Cynthia Foulkes
Curriculum Coordinator	Karen Harper
Curriculum Advisor	Kathleen Delaney
Curriculum Advisor	Robert Honkisz
Graphic Artist	Karen Madden
Evaluation Consultant	A. Edward Ahr

Donald Martin, Project Director, holds B.A. and M.A.T. degrees from Harding College in Arkansas. He has worked as Assistant Principal at the Junior High School level, Director of a Demonstration Center for Gifted Children, and as Director of Federal Programs. As Program Director for Project C.H.A.N.G.E., he is responsible for the overall administration of the project.

Sherry Smith, Project Coordinator, has the B.A. from College of St. Francis in Illinois and M.S. from Chicago State University. Her previous experience includes classroom teaching and speech pathology at the elementary level. As Coordinator of Project C.H.A.N.G.E., she is responsible for the day-to-day operation of the program including grant writing, curriculum planning, and design of assessment instruments.

Alan Balter, Assistant Project Coordinator, has B.S., M.S., and Ph.D. degrees from the University of Illinois. He has worked as a teacher of retarded children, researcher, and university professor. As Assistant Coordinator, he helps with the daily functioning of the program and project dissemination.

LaVerne Galzin, Medical Consultant for the project, is a registered nurse who also holds the B.S. degree. She has wide experience working as a hospital nurse, public health nurse as well as a school nurse. In her role as Medical Consultant she explains nursing and medical information and strategies to program staff and is the program laisson to the medical profession.

Cynthia Foulkes, Media Consultant for the project, holds the B.S. in Education from Illinois State University and the M.S. in Education from Chicago State University. Her experience includes working as a School District Librarian and Director of a Learning Resource Center. She is responsible for ordering and processing all program materials as well as assisting program staff plan and execute audio-visual presentations.

Karen Harper, Curriculum Coordinator has the M.A. degree in Learning Disabilities and has many years of teaching experience in special education. She has developed the Kindergarten and Primary grades curriculum and supervised curriculum development at other levels.

Kathleen Delaney, Curriculum Advisor, has a B.A. degree from St. Xavier College in Illinois. She has worked as a teacher's aide in Project Head Start and as a teacher in the elementary grades. Her major responsibilities have been writing the project curriculum and lesson plans for grades 4-6.

Robert Honkisz, Curriculum Advisor, has the B.S. degree from the University of Illinois. He has worked as a physical education teacher in the elementary grades. His primary responsibilities have been writing project curriculum and lesson plans for grades 7-8.

Karen Madden, Graphic Artist, holds the B.S. degree from Northern Illinois University and the M.S. from Illinois Institute of Technology. She works as an Art Teacher for children between Kindergarten and 8th grade. Her major responsibility for the project involves producing original artwork for program materials.

A.Edward Ahr, Evaluation Consultant, has the B.S. and M.S. degrees from the University of New Mexico and the Ed.D. degree from Loyola University in Chicago. His work experience includes classroom teaching, school psychology, school administration and university teaching. His project responsibilities involve designing assessment techniques, statistical analysis of data and program evaluation.

RIDGELAND PUBLIC SCHOOLS
DISTRICT 122
TITLE IV C - ESEA
PROJECT: C.H.A.N.G.E.
TEACHER MANUAL.

CONCEPTS OF HANDICAPS AND ATTITUDES NEED GUIDANCE AND EDUCATION

INTERMEDIATE CURRICULUM

CURRICULUM COORDINATOR: KATHLEEN DELANEY

SUPERINTENDENT: ROBERT L. OLCESE, Ph. D.

DIRECTOR: DONALD W. MARTIN COORDINATOR: M. SHERRY SMITH

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- Acceptance of Self and Others (Handicapped and Non-Handicapped)
- Physiology of the Eye
- Blindness
- Physiology of the Endocrine System
- Diabetes

FIFTH GRADE PROGRAM

- Objectives
- Acceptance of Self and Others (Handicapped and Non-Handicapped)
- Physiology of the Ear
- Deafness
- Physiology of the Oral Mechanism
- Speech Impairments

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SIXTH GRADE PROGRAM

- Objectives
- Acceptance of Self and Others
  (Handicapped and Non-Handicapped)
- Physiology of the Central Nervous System
- Epilepsy
- Basic Anatomy
- Physical Handicaps

INTRODUCTION

The philosophy of Project C.H.A.N.G.E. (Concept of Handicaps and Attitudes Need Guidance and Education) is handicapped people have the right to be accepted as worthwhile individuals by their non-handicapped peers. Today, non-handicapped individuals are having increasing contact with handicapped individuals. Public Law 94-142 (The Education For All Handicapped Children Act) has added momentum to the growing rights movement of disability groups. However, increased rights for the handicapped population do not mean increased acceptance.

If handicapped individuals are to be successfully integrated into our schools, community, and society they must first be viewed and accepted as worthwhile individuals with the same feelings and needs as non-handicapped individuals. They must be viewed as being capable of sharing with non-handicapped individuals those experiences which constitute life.

Negative reactions towards people we perceive as different from ourselves are a common experience. We feel anxiety, fear, discomfort, or even hostility. Myths and stereotypes concerning these individuals are often incorporated into our value system. However, people do have the ability to change.

Attitudes are influenced by a variety of situational contacts with our family and society. Thus, it is possible for our attitudes to change or modify as a result of our experiences. The goal of Project C.H.A.N.G.E. is to influence and change those holding negative attitudes toward handicapped individuals. This is done by giving children a chance to acquire knowledge about handicapped individuals and their handicapping conditions. Knowledge will help to alleviate the common feelings of anxiety, fear, discomfort or hostility which non-handicapped individuals often experience when encountering a handicapped individual. Opportunity is provided for positive experiences with handicapped people which initiate the giant step towards positive attitudes.

Program teachers are an extremely important factor. They influence and foster knowledge and the attitude of acceptance in their students. They encourage their students to honestly examine and express their positive and negative feelings by creating an accepting atmosphere which develops student support. The expression and examination of positive and negative feelings by the student and the teacher is extremely important. The goal of the program is not to teach children to say "nice" things about handicapped people but to help them develop genuine feelings of acceptance for the disabled. Project C.H.A.N.G.E. deems it necessary to deal with positive and negative feelings as an initial step in successful program implementation and promotion of the ultimate goal - acceptance of the handicapped.

OVERVIEW OF THE INTERMEDIATE PROGRAM

FORMAT OF TEACHERS MANUAL

The intermediate program is divided into three separate curricula. Each level is composed of five units. The fourth grade units are: Acceptance of Self and Others (Handicapped and Non-Handicapped), Physiology of the Eye, Blindness, Physiology of the Endocrine System and Diabetes. At fifth grade, the units are: Acceptance of Self and Others (Handicapped and Non-Handicapped), Physiology of the Ear, Deafness, Physiology of the Oral Mechanism and Speech Impairments. The conclusion of the intermediate program is the following sixth grade units: Acceptance of Self and Others (Handicapped and Non-Handicapped), Physiology of the Central Nervous System, Epilepsy, Basic Anatomy and Physical Handicaps. For convenience, the Manual is divided by grade levels. Teachers should view the complete curriculum but need only their specific grade level for instructional purposes.

Each unit at a specific grade level includes:

1. Introduction, objectives and concepts
2. Activities

and a 3. Bibliography.

The Introduction provides the rationale and basis background information for the unit. The behavioral objectives state the desired student response/outcome for unit completion. Basic concepts are provided to further clarify each objective.

The Activities section is composed of a series of lesson plans. Each lesson plan includes:

1. Objectives - what the student should be able to do when the activity is completed
2. Materials - what is necessary to teach this lesson

and a 3. Procedure - specific suggestions on how to conduct the class activity or utilize films, filmstrips and books.

The Bibliography contains a brief synopsis of films, filmstrips and books which are appropriate for the unit.

SEQUENCE OF UNITS

Units are arranged in a predesignated order which best accomplishes the over-all goal of the program. The first unit at each level is Acceptance of Self and Others (Handicapped and Non-Handicapped). This unit precedes the study of specific disabilities based on the premise that in order to accept others one must first accept themselves.

In the intermediate program, the normal functions of the body systems are studied prior to the deficiencies. An example, at the fourth grade level is the unit on the Physiology of the Eye and The Physiology of the Endocrine System which are studied in preparation for the disabilities units of Blindness and Diabetes. This portion of the program is related to the cognitive development of the students in the areas of handicaps.

At each grade level, topics were paired according to the cause-effect relationship of handicaps. For example, at the fourth grade curricula the units on Blindness and Diabetes are linked because of the correlation factor. Diabetes being the number one cause of blindness.

As one examines the fifth and sixth grade units reading through the introduction and concepts, one can see the correlation of the selected topics at each grade level.

The intermediate program builds the necessary foundation of knowledge which culminates in the Junior High curriculum. For implementation of an effective and successful program,units should be taught in the order which they appear in the Manual.

TEACHING THE CURRICULUM

The program is designed for teachers to complete one activity per week with the students over a period of four months. Each unit covers a time span of three to five weeks. The teacher may choose a lesson plan described in the Activity section of the Manual or use/develop other materials which correlate with the objectives and concepts of the unit. The choice of materials and activities should be based on the objectives of the unit for each grade level and the individual needs of the class. Teachers should know the sequential development of the objectives at all grade levels when choosing Activities for a specific unit. In this way, a cohesive program is presented to the student.

The lesson plans include various types of activities. Among these are:

1. Ingenuity Exercises - Each unit begins with a puzzle or matching exercise which familiarizes the students with the terminology used in the unit.

2. Lectures - For some topics, prepared lectures have been chosen as the best form of presentation. The lectures are based on the concepts and objectives for the unit. Through this format, medical terminology has been reduced to an understandable level for teachers and students while maintaining the predesigned program criteria.

3. Simulation Activities - During these activities the students experience what it's actually like to be handicapped by using a method to simulate a handicapping condition. This might be achieved by activities such as trying to pour water into a cup or find the classroom door while blindfolded.

These activities help the students to understand the problems a handicapped person encounters in daily living. They also establish a basis for acceptance by fostering the development of empathy for the disabled person. All students should have an opportunity to participate in simulation experiences. They should be encouraged to think about and describe how it feels to be handicapped.

4. Filmstrips, movies, and books - Lesson plans using films filmstrips and books are included. These materials help the students to better understand handicapping conditions. They should be used with the specific objective at the grade level. After viewing the material, discussions should help students to achieve the objectives. The lesson plans contain specific directions for use of audio-visual material. These materials are one method for developing empathy.

5. Class discussion - Students should be encouraged to ask questions and talk about their feelings. It is important to accept all feelings - even negative ones. Rather than judge students' feelings, the teachers should help the students to discover why they have a particular feeling.

6. Guest Speakers - Probably the most important and enjoyable activity of the program is providing an opportunity for students to interact with handicapped people. This experience allows the student to perceive the handicapped person as an individual with feelings, needs, talents, and problems similar to themselves.

An especially exciting speaker to invite is a person who is blind and uses a guide dog. Speakers may be found by asking friends, or contacting local agencies such as: The Association for the Blind, Division of Vocational Rehabilitation, Easter Seal Society, United Cerebral Palsy, local hospitals, etc. Speaker discussion topics must be correlated with the objectives at each grade level. Personally meeting someone with a disability in a positive atmosphere is an important experience in developing acceptance and empathy towards handicapped people as worthwhile individuals.

PROGRAM IMPLEMENTATION

LEARNING CENTER INSTRUCTIONS

The material for all Activities at each level are housed in the Learning Center. Materials are stored in appropriately marked unit boxes according to grade levels. All materials which are necessary for the unit can be found in this box.

The teacher checks the unit material box out of the learning center by signing the sign out card located on the top of the unit box.

After each lesson the teacher should place the materials used back in the unit box. The unit material box should then be returned to the learning center so it is accessible to other teachers at this level.

USE OF THE TEACHERS MANUAL

As previously explained in the Overview, one lesson per week (of your choice) from the Activities section is to completed with the students. The unit material boxes contain all the necessary articles for the lesson plan.

Starting with the first unit at your level, select one activity. After teaching the activity turn to the Lesson Plan Checklist located at the end of the unit and write the title of the activity on the line next to the appropriate week. Rate the Activity using the code on the Lesson Plan Checklist.

At the conclusion of each unit select one Activity which has been taught and evaluate this lesson on the Unit Evaluation Form (which follows the Lesson Plan Checklist). A Unit Evaluation Form must be completed for each unit.

CALL IN SCHEDULE

The "Call In" schedule provides the dates when Teacher Manuals are turned into the school office. At this time, the Lesson Plan Checklist and Unit Evaluation Forms are reviewed and initialed by the Principal. Teachers Manuals are then returned promptly to the teachers for continued program implementation.

SPEAKERS LIST

A minimum of one guest speaker per grade level will be arranged by the Principal or a designee. After Speakers have been scheduled teachers will be notified of the date, time and location of the speaking engagement. Whenever possible, teachers will be allowed to sign up for the time of their choice.

Teachers will be notified of speaker cancellations as soon as possible.

ASSESSMENT INSTRUMENTS

A Skill Attainment Checklist has been designed for each level of the program. These instruments are designed to measure the students achievement in terms of grade level objectives and concepts.

Student instruments are given pre and post the intervening program. Both experimental and control students participate in the assessment instruments to determine the statistical level of significance the project has achieved.

Complete instructions for the instruments are packaged with the assessment materials.

READABILITY STUDY

Nancy Updegraff
Reading Consultant

In each of the work sheets the readability level varies from two years below the grade for which the sheet was designed, to a half year above the grade listed on the top of the sheet. Therefore, the majority of the students (with some assistance on terms) should be able to read the worksheets.

Much of the terminology is complicated and difficult to pronounce. It is not important for students to correctly pronounce terms in order to identify them or to read the material around them. If a term seems bothersome tell the student to call it blank or blank and match or read as needed. For word puzzles the student should be able to locate the word or tell it is on a cross word puzzle by process of elimination even though they may not be able to correctly pronounce it. Worksheets can be done orally, in a group or in partners.

ACCEPTANCE OF SELF & OTHERS

(HANDICAPPED AND NON-HANDICAPPED)

INTERMEDIATE LEVEL

PROJECT: C.H.A.N.G.E.
TITLE IV C

INTRODUCING THE UNITS

Project C.H.A.N.G.E. has been written to educate children about handicaps and handicapped people. It also attempts to awaken in the children an understanding that handicapped people have feelings and a sense of self worth just as normal people do. The curriculum and lesson plans are provided by Project C.H.A.N.G.E., but it is the teacher who makes the program a success in the classroom.

In order for the lessons to be more effective, a teacher should become familiar with the topic by reading the objectives and concepts of the unit. A teacher who is acquainted with the information on handicaps feels more confident about relating and discussing it with the students.

As a reinforcement, the teacher should teach the concepts of each unit prior to doing the lesson plans. This can be done by simply reading the concepts to the students and discussing important points with them.

Project C.H.A.N.G.E. provides the information for children to gain knowledge about handicaps and to develop a positive attitude toward handicapped people. It is the teacher who gives the students the opportunity to gain cognitively and affectively by making a conscientious effort to implement Project C.H.A.N.G.E. into the classroom.

PROJECT: C.H.A.N.G.E.
6TH GRADE CURRICULUM
INTRODUCTION: ACCEPTANCE OF SELF AND OTHERS

In grades four and five the children studied about their own feelings and emotions. They learned that all feelings are acceptable and that everyone is different. It is now time to make a connection between themselves and the handicapped person. The handicapped person also has feelings, emotions and differences. In this unit, the student can begin to see that in many ways the handicapped person is very like the non-handicapped.

The objectives and concepts to be taught in this unit are:

Unit	Objective	Concept
Acceptance of Self and Others.	The students understand that handicapped people experience the same feelings non-handicapped people do.	All people have feelings.
	The students understand that handicapped people have the same needs as non-handicapped people.	Maslow categorizes the basic needs of man as: Physiological (needs for food, water, rest, activity, etc.). Security (safety from the things we believe could be harmful to us). Love (need to be loved and to feel that one belongs). Self-worth (need to feel that we are doing something worthwhile and are persons of worth). Self-actualization (need to make use of our potential, to fully develop ourselves as individuals).
	The students are aware of some of the emotional problems that may result from being handicapped.	A person who is handicapped through accident or disease goes through a five step grieving process: 1. Denial 2. Anger 3. Bargaining 4. Depression 5. Acceptance The handicapped person may have difficulty accepting themselves as worthwhile individuals. The handicapped person may have to deal with lack of knowledge, understanding, and acceptance by other people.

PROJECT: C.H.A.N.G.E.
6TH GRADE CURRICULUM
ACCEPTANCE OF SELF AND OTHERS

ACTIVITY:

Discussion of Maslows basic needs from concepts on introduction sheet. Discuss 5 steps of grieving process using the overheads. Puzzle.

OBJECTIVE:

The students will become familiar with the terminology used in a discussion of the emotional problems faced by the physically handicapped person.

MATERIALS:

Overheads depicting the five steps of the grieving process.
List of Maslows Basic Needs listed in the Concept section of the Curriculum.
Puzzle.

PROCEDURE:

Begin by informing the children of Maslows basic needs. Follow this by showing the overheads of the 5 step grieving process. Allow the students to complete the worksheet. Go over answers orally.

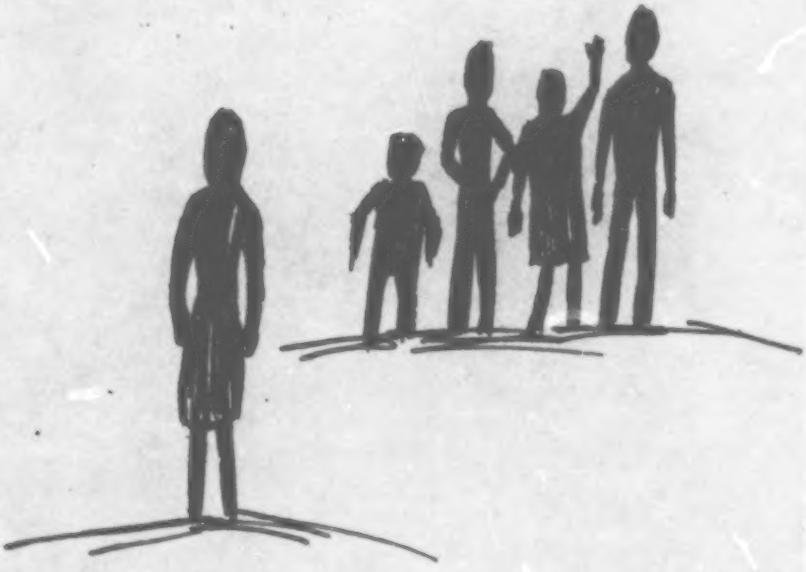
PROJECT: C.H.A.N.G.E.
6TH GRADE CURRICULUM
ACCEPTANCE OF SELF AND OTHERS
PUZZLE CLUES

Across:

1. Freedom from fear
2. Person accepts his handicap and begins to grow in overcoming it
3. Person believes if he does certain things he or she will get better
4. Person lashes out at things, other people, God, etc.
5. Person denies he has the handicap

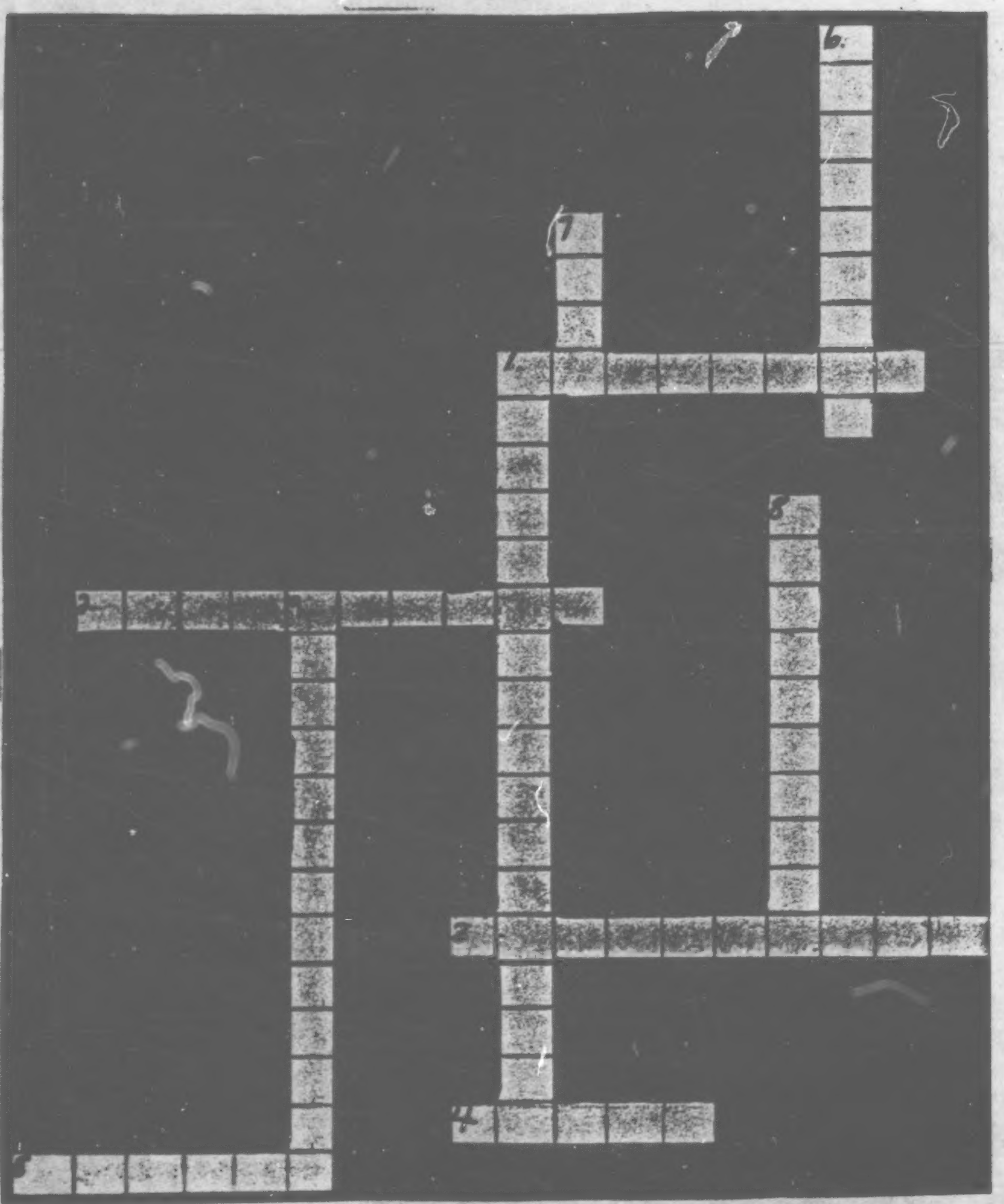
Down:

1. Need to fully develop one's potential as an individual
6. Need to feel needed, worthwhile
7. Need to be loved to feel one belongs
8. Person feels his life is hopeless
9. Person needs food, water, rest, exercise, etc.



PROJECT: C.H.A.N.G.E.
6TH GRADE CURRICULUM
ACCEPTANCE OF SELF AND OTHERS

CROSSWORD PUZZLE



PROJECT: C.H.A.N.G.E.
6TH GRADE CURRICULUM
ACCEPTANCE OF SELF AND OTHERS
CROSSWORD PUZZLE - ANSWER SHEET

Across:

1. Security
2. Acceptance
3. Bargaining
4. Anger
5. Denial

Down:

1. Self Actualization
6. Selfworth
7. Love
8. Depression
9. Physiological

PROJECT: C.H.A.N.G.E.
6TH GRADE CURRICULUM
ACCEPTANCE OF SELF AND OTHERS

ACTIVITY:

Filmstrip and Cassette: "Mimi"

OBJECTIVE:

The students will be better able to understand some of the physical and emotional problems faced by the physically handicapped person.

MATERIALS:

Filmstrip, Cassette and Discussion Guide "Mimi", from the Kit - This Is Who I Am (Guidance Associates).

PROCEDURE:

After viewing the Filmstrip, use the set of questions from the discussion guide on page 6 and page 7, which accompanies the film.

PROJECT: C.H.A.N.G.E.
6TH GRADE CURRICULUM
ACCEPTANCE OF SELF AND OTHERS

ACTIVITY:

Filmstrip and Cassette "You Have Something to Offer", from the kit Fat Albert and the Cosby Kids, and worksheet activity sheet Experience 3 in teachers manual which goes with the kit Fat Albert and the Cosby Kids.

OBJECTIVE:

Students will be better able to appreciate the feelings and problems of those who have handicaps.

MATERIALS:

Filmstrip and Cassette "You Have Something to Offer", from the kit Fat Albert and the Cosby Kids (McGraw Hill Films).

Experience Sheet #3 in the teachers manual that goes with the filmstrip.

PROCEDURE:

After viewing the filmstrip, distribute Experience Sheet 3 and allow the students to complete it. Use the sheet as a basis for class discussion.

PROJECT: C.H.A.N.G.E.
6TH GRADE CURRICULUM
ACCEPTANCE OF SELF AND OTHERS

ACTIVITY:

Filmstrip and Cassette "Experiencing Differences"

OBJECTIVE:

The students become aware of the special problems and needs of a handicapped student.

MATERIALS:

Filmstrip and Cassette "Experiencing Differences", from the kit You're Different So Am I (Guidance Associates)

PROCEDURE:

After viewing the filmstrip, use the questions on page 8 and 9 of the teachers guide which accompanies the kit. Questions 6-12 are particularly good for this filmstrip.

PROJECT: C.H.A.N.G.E.
6TH GRADE CURRICULUM
ACCEPTANCE OF SELF AND OTHERS

ACTIVITY:

Read one or more of the books listed in the materials section of this lesson plan.

OBJECTIVE:

This is a plan for children who are interested in going further into the subject matter on this unit. By reading about children with special problems, it is hoped that the reader will grow in understanding about people with handicaps.

MATERIALS:

The Unmaking of Rabbit, by Constance Greene (Viking Press)

The Hayburners, by Gene Smith (A Yearling Book)

Special People, by Arnold Sockmary and Roger Zeeman (New Jersey Association for Children with Learning Disabilities)

PROCEDURE:

Have the students read the books and make a book report. The report should contain the title, author, and a brief summary. These reports may be shared with the class.

PROJECT: C.H.A.N.G.E.
6TH GRADE CURRICULUM
ACCEPTANCE OF SELF AND OTHERS
(HANDICAPPED AND NON-HANDICAPPED)

ACTIVITY:

Film Strip "It's Just Me," "Freestyle Is My Style"

OBJECTIVES:

Students understand the problems of the physically handicapped.

MATERIALS:

Film Strip and Cassette. "It's Just Me", "Freestyle Is My Style". (The Orthopedically Handicapped Child) (Paramount Communications)

PROCEDURE:

After viewing the film strip, discuss the following questions:

1. How did Eileen become physically handicapped?
2. How did Eileen's physical education teacher prepare the class for Eileen's entry into the class?
3. How did Eileen want to be treated?
4. What changes were made in Eileen's classroom? Why were they made?

PROJECT: C.H.A.N.G.E.
6TH GRADE CURRICULUM
ACCEPTANCE OF SELF AND OTHERS
(HANDICAPPED AND NON HANDICAPPED)

Activity:

Film "Nobody's Useless"

Objective:

Students recognize the need all people have to feel they are persons of worth, that they belong, and that they can fully develop themselves as individuals.

Materials:

Film "Nobody's Useless" (Encyclopedia Britannica Educational Corporation.)

Procedure:

1. Before showing the film, ask the class the first two questions.
   - A. Has anyone in the class read any of The Great Brain books by John D. Fitzgerald?
   - B. If so how do you feel about Tom? J.D.?
2. Show the film.
3. After the film discuss it. You may use the following questions:
   - A. Did the characters in the film change after Andy's accident? If so, How?
   - B. What basic needs of Andy's were not being met? (His need for love, self worth, and self actualization.)
   - C. Do you think Andy's parents and the boys in town could have done more to help him adjust to his handicap? What would you have done?

PROJECT: C.H.A.N.G.E.
6TH GRADE CURRICULUM
ACCEPTANCE OF SELF AND OTHERS
(HANDICAPPED AND NON HANDICAPPED)

D. Were you surprised when Tom returned the erector set? Why to you think Tom returned it?

E. Do you think Tom really reformed?

PROJECT: C.H.A.N.G.E.
6TH GRADE CURRICULUM
ACCEPTANCE OF SELF AND OTHERS
(HANDICAPPED AND NON-HANDICAPPED)

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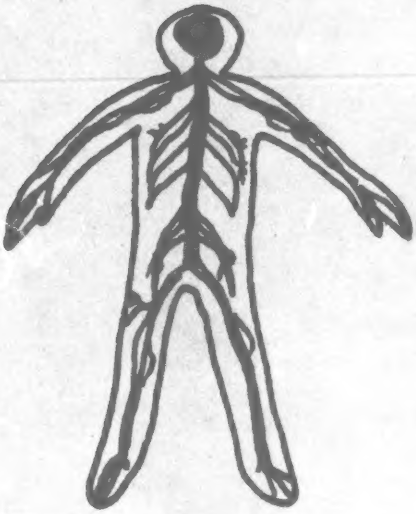
PHYSIOLOGY OF THE CENTRAL NERVOUS SYSTEM



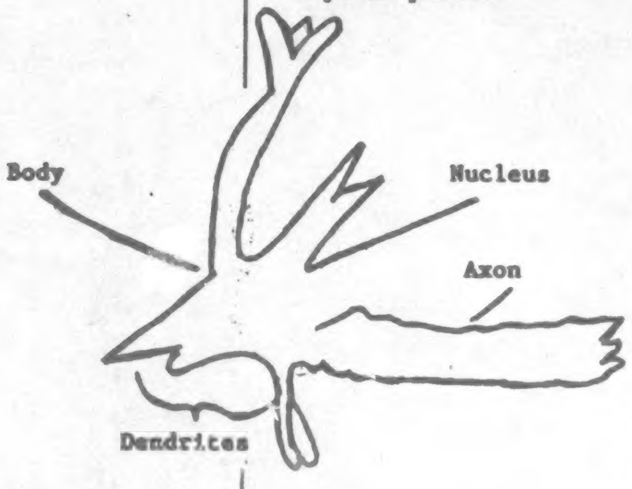
INTERMEDIATE LEVEL

PROJECT: C.H.A.N.G.E.
6TH GRADE CURRICULUM
INTRODUCTION: PHYSIOLOGY OF THE CENTRAL NERVOUS SYSTEM

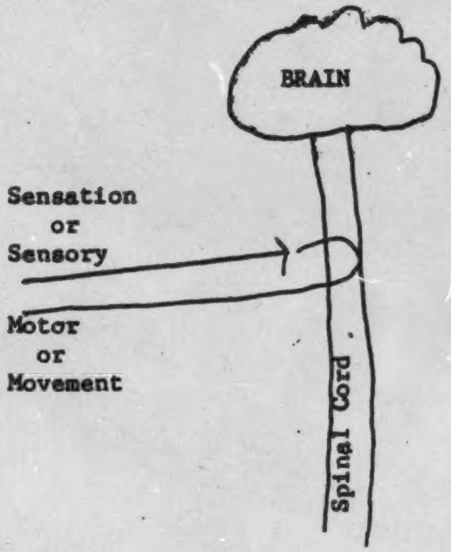
The purpose of this unit is to familiarize the students with the functioning of the Central Nervous System in a healthy person. This is done to prepare the students to study the disease of Epilepsy in the unit following this. In order for the students to understand the nature of Epilepsy which is a disease affecting the nervous system, they must first understand how the nervous system functions properly.

The objectives and concepts taught in this unit are:

UNIT	OBJECTIVE	CONCEPT
Physiology of the Central Nervous System	The students can identify the two divisions of the nervous system.	The nervous system can be divided into two parts: the central nervous system and the peripheral nervous system.
	The students can identify the main components and functions of the central nervous system.	The central nervous system consists of the brain and the spinal cord: the brain is enclosed in the vertebrae. The function of the brain is thought and coordination of all body functions. The functions of the spinal cord is to transmit impulses to and from the brain and also controls reflexes. The nerve cells or neurons carrying impulses to the brain are called afferent or sensory. The neurons (nerve cells) carrying impulses away from the brain are called efferent or motor. The peripheral nervous system is divided into 2 main divisions: 1. Motor nerves whose function is to carry impulses from the spinal cord to a pre-determined point on a muscle and initiate movement. 2. Sensory nerves control feeling or sensation of all of the body. Their function is to receive stimuli and transmit the sensation to the brain and spinal cord. The brain and spinal cord will decode this message and stimulate a specific motor nerve which in turn results in a specific movement. Example: when you have an itch - you scratch where it itches.

UNIT	OBJECTIVE	CONCEPT
Physiology of the Central Nervous System (cont.)		Motor and sensory nerves are composed of billions of nerve cells (neurons) and a simple movement like blinking your eye involves hundreds of neurons.
	The students know the function of the autonomic nervous system.	The autonomic nervous system includes the brain, spinal cord and peripheral nervous system working in close association. The autonomic nervous system controls all automatic or involuntary functions. The autonomic nervous system controls the body in times of high stress and in emergencies. The heart rate increases, respiration increases, and the entire body becomes alert and responsive. This is called a fight or flight response. Example: anger and fear. The para-sympathetic system slows heart rate, respiration and all body responses, this is done to conserve energy. Example: sleep.
	The students can name a nerve cell and identify its parts. 	A nerve cell or neuron is composed of four main parts: 1. The body which is the largest portion of a neuron. 2. The nucleus which is the "brain" of the neuron. 3. The axon which is an arm-like projection which helps to connect one neuron to another. 4. The dendrites are branch-like projections which increase the surface area of a neuron to help pick-up sensory impulses.

PROJECT: C.H.A.N.G.E.
TITLE IV C - ESEA
SIXTH GRADE OBJECTIVES

Unit	Objectives	Concept
Physiology of the Central Nervous System (Cont.)	The students can define a reflex and give examples.	A reflex is an involuntary action which does not involve the brain. Stimuli or sensation is received by sensory neurons and travels to the spinal cord. Instead of continuing to the brain to be decoded, it's direct action is on the motor neuron and movement. This is called reflex arc:  BRAIN Sensation or Sensory Motor or Movement Spinal Cord Example: when you burn a finger - you move without thinking very quickly. Reflex Action.

PROJECT: C.H.A.N.G.E.
6TH GRADE CURRICULUM
PHYSIOLOGY OF THE CENTRAL NERVOUS SYSTEM

ACTIVITY:

1. Use the charts #4 and 5 in the kit "The Human Body System for Sensing and Moving".
2. Do the Central Nervous System Match on the worksheet.

OBJECTIVE:

The students know the terminology of the Central Nervous System. The students locate and define the major sections of the nervous system.

MATERIALS:

1. Charts #4 and 5 from the kit, "The Human Body Systems for Sensing and Moving" (Encyclopedia Britannica)
2. Central Nervous System Match Worksheet.

PROCEDURE:

After throughly going over the chart, have the students locate information from reference books on the nervous systen to help them work the puzzle. Go over the puzzle with class to check.

ANSWER KEY

The answer to the Central Nervous System Match is:

NETWORK OF NERVES

PROJECT: C.H.A.N.G.E.
6TH GRADE CURRICULUM
PHYSIOLOGY OF THE CENTRAL NERVOUS SYSTEM

NAME ____

CENTRAL NERVOUS SYSTEM MATCH

Match the letters on the right with the numbers on the left to get another word for the nervous system.

___ 1. Central Nervous System

___ 2. Spinal Cord

___ 3. Brain

___ 4. Peripheral Nervous System

___ 5. Cerebrum

___ 6. Brain stem

___ 7. Left half of the brain

___ 8. Right half of the brain

___ 9. Cerebellum

___10. Neuron

___11. Axon

___12. Synapse

___13. Dendrites

___14. Autonomic Nervous System

___15. Reflex action

O. Artistic and emotional half of the brain.

R. Part of the brain which controls lungs, heart, digestive tract, etc.

V. Thread-like structures branching out from the body of the nerve cell.

N. Nerve cell

E. Elongated part of a neuron protected with a myelin sheath.

R. Space between neurons.

S. An involuntary action caused by a stimulus.

N. brain and spinal cord

W. Carries impulses to and from the nervous system.

E. Controls the action of the smooth muscles.

K. More logical side of the brain.

F. Section of the brain that controls the movement of muscles and helps us keep our balance.

T. Located in the skull.

O. Largest topmost part of the brain which controls thinking and talking.

E. Large cord which runs down our backs and is connected to the brain.

PROJECT: C.H.A.N.G.E.
6TH GRADE CURRICULUM
PHYSIOLOGY OF THE CENTRAL NERVOUS SYSTEM

ACTIVITY:

Filmstrip "The Nervous System."

OBJECTIVE:

The students will be able to locate and define the various parts of the nervous system.

MATERIALS:

The filmstrip and cassette "The Nervous System" from the series "The Biology of the Human Body" (Encyclopedia Britannica)

PROCEDURE:

After viewing the filmstrip, ask the following questions for discussion.

1. How many sides does the brain have?
   What does each half control?
2. What are the three main sections of the brain?
   What does each part control?
3. Give another name for a nerve cell?
4. What three parts make up a nerve cell?
5. What does the autonomic nervous system control?
6. What are the main parts of the nervous system?

ANSWERS:

1. Right and left side.
   Right side controls the artistic side of man.
   This is the emotional side.
   The left side is the logical side.
   This is the side which enables us to learn math and science.
2. Cerebrum, cerebellum, brain stem.
   Cerebrum - thinking, talking.
   Cerebellum - controls muscle movements and helps us to keep our balance.
   Brain Stem - Controls movement of our muscles, understands and sorts out information from our senses.
3. Neuron
4. Axon, dendrite, cell body
5. The autonomic nervous system controls the movement of the involuntary muscles, such as the lungs, heart, stomach, and digestive tract, etc.
6. The nervous system is made up of the brain, spinal cord, and nerves.

PROJECT: C.H.A.N.G.E.
6TH GRADE CURRICULUM
PHYSIOLOGY OF THE CENTRAL NERVOUS SYSTEM

ACTIVITY:

Book: THE NERVOUS SYSTEM.

OBJECTIVE:

This book is to provide enrichment for those students whose interest carries them further. It should provide further information about the functioning of the nervous system.

MATERIALS:

Book: THE NERVOUS SYSTEM by Dr. Alvin Silverstein and Virginia Silverstein (Prentice Hall, Inc., Englewood Cliffs, N.J.) 1972

PROCEDURE:

The students read the book and write a brief summary listing the title and the author. This may be presented to the class orally.

PROJECT:C.H.A.N.G.E
6TH GRADE CURRICULUM
NERVOUS SYSTEM

Activity:

Chart and worksheet on the nervous system in the kit Inside Me

Objectives:

To enable the students to locate and define parts of the nervous system.

Materials:

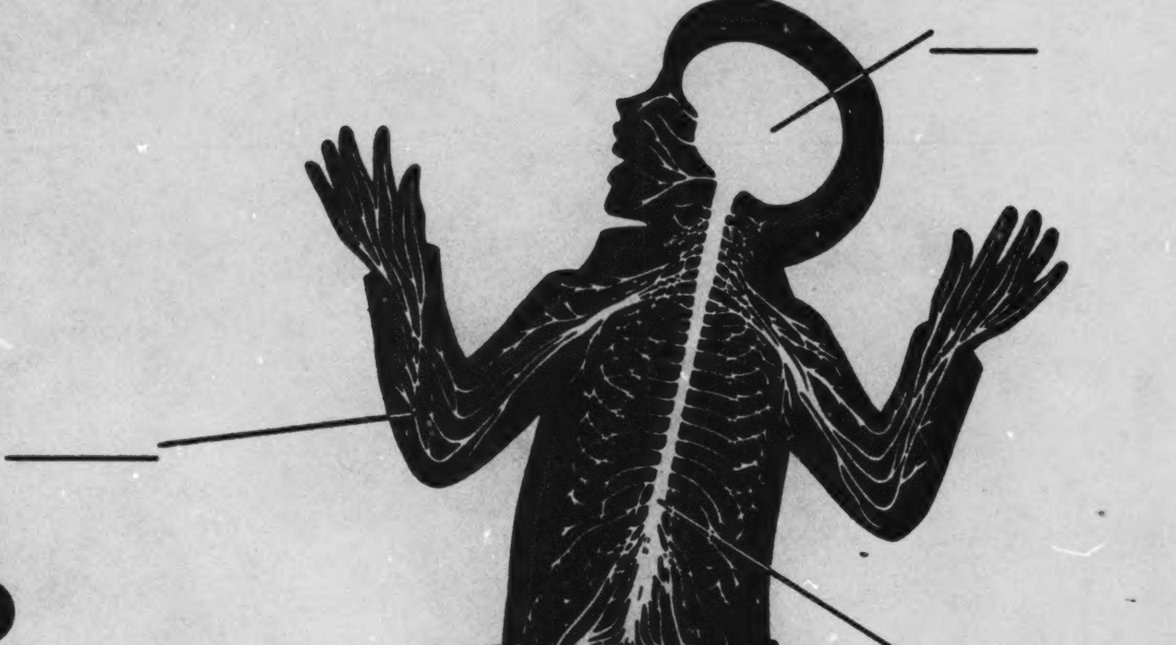
Chart and worksheet on the nervous system from the kit Inside Me (Developmental Learning Materials. Niles, Ill. 1980)

Procedure:

Copy the worksheet on the nervous system. Teacher should hold up the chart showing the girl watching the bursting balloon while he or she reads the background information on p. 13 of the Manual. The teacher should then turn the chart over and go over the labelled parts with the class. Then the worksheet should be distributed and the students allowed to label the parts of the nervous system.

______________ SYSTEM

the system that controls and regulates the activities of the other body systems



Nerves **Sensory Nerves** **Motor Nerves**

Nervous **Brain** **Spinal Cord**

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PROJECT: C.H.A.N.G.E.
6TH GRADE CURRICULUM
PHYSIOLOGY OF THE CENTRAL NERVOUS SYSTEM

ACTIVITY:

Research project on one area of the brain.

OBJECTIVE:

Student gains in knowledge of a part of the brain and it's function.

MATERIALS:

Use reference material in the library/learning center.

PROCEDURE:

Have the students choose one area of the brain to research. Students may choose: 1) cerebrum 2) brain stem 3) left half of the brain 4) right half of the brain or the 5) cerebellum. In the report the students should include: 1) the location of the section 2) the function of the section and 3) draw a diagram of the section.

PROJECT: C.H.A.N.G.E.
6TH GRADE CURRICULUM
PHYSIOLOGY OF THE CENTRAL NERVOUS SYSTEM

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EPILEPSY

INTERMEDIATE LEVEL

PROJECT: C.H.A.N.G.E.
6TH GRADE CURRICULUM
INTRODUCTION: EPILEPSY

Now that the children have studied the Central Nervous System, they are prepared to study epilepsy, a disease characterized by certain brain dysfunctions.

The children will study the types of epilepsy, medical treatment available and the problems epileptics have in being accepted by society.

The objectives and concepts presented in this unit are as follows:

UNIT	OBJECTIVE	CONCEPT
Epilepsy	The student knows what the word epilepsy implies.	Epilepsy is a disorder resulting in intermittent imbalances of the electrical activity of the brain, characterized by seizures in one form or another. The word epilepsy comes from the Greek word for seizures.
	The student can identify what occurs within the brain during a seizure.	An epileptic seizure is the visible sign that brain cells are firing out of the regular sequence and causing neighboring cells to discharge also.
	The student can identify the physical manifestations of the three major types of seizures.	There are three common types of epileptic seizures - grand mal, petit mal and psychomotor. Grand mal seizures usually are characterized by a loss of consciousness, stiffening of the body, and rapid jerking of the limbs and/or trunk, neck, eyes and face. It is sometimes accompanied by irregular breathing and drooling. Usually, grand mal seizures last 2 to 5 minutes. After a grand mal seizure, the person may feel confined or tired and fall asleep. Petit mal seizures usually are characterized by staring spells, rapid blinking of the eyes, or sometimes small twitching movements. This may last 5 to 25 seconds. During this time, the individual is unaware of their surroundings. This type of seizure usually occurs in children between the ages of 6 and 14 and may occur as often as 100 times a day. After the seizure, the person resumes his activity as if nothing has happened.

Unit	Objective	Concept
Epilepsy (Cont.)	The student can identify the physical manifestations of the three major types of seizures (Cont.)	Psychomotor seizures usually are characterized by automatic, repetitive movement such as stroking of the hair, rubbing of the leg, or plucking at clothes, chewing, lipsmacking, etc.. The person experiencing a psychomotor seizure may also have a buzzing or ringing in the ear, or experience a strong emotion of unexplained anger or fear. They are not unconscious but in sort of a dream state. Afterwards, they will remember little or nothing of what happened during the attack. This form gets its' name from the fact that the abnormal electrical discharges act on both the mental processes (psyche) and the muscles (motor). Many individuals having epilepsy experience a warning or aura. This may be in the form of an unpleasant odor, a sound, a "feeling", etc..
	The student can identify the categories and some causes of epilepsy.	Epilepsy is classified as symptomatic or idiopathic. In symptomatic epilepsy, attacks can be traced to a specific injury to the brain. For some cases, there are no apparent causes (this does not necessarily mean that there is not a specific cause, just that it has not been discovered). Such cases are called idiopathic. Some possible causes of epilepsy are: A. Congenital and heredity diseases. These may include failure of the brain and nervous system to fully develop. B. Congenital infections. C. Inborn errors of metabolism such as phenylketonuria.

Unit	Objective	Concept
Epilepsy (Cont.)	The student can identify the categories and some causes of epilepsy. (Cont.)	D. Infections such as German Measles in the mother while carrying the child. E. Drugs taken by the mother while carrying the child. F. Head injuries. G. Brain tumors and infections of the membrane around the brain or the brain itself (meningitis and encephalitis). H. High fever.
	The student can identify how epilepsy is diagnosed and controlled.	An electroencephalogram (EEG) is commonly used to diagnose epilepsy. This test is also used many times in connection with other brain injuries (possible skull fractures) etc.. The individual's medical history is carefully evaluated in conjuction with other tests to find the possible cause. Seizures in epileptics usually are controlled by taking daily oral medication.
	The student can identify the rate of epilepsy in the general population.	Approximately four hundred thousand persons in the United States are believed to have this disorder and 80% of the cases of epilepsy are seen in the first 19 years of life. Most people with epilepsy, both adults and children are of average or above average intelligence.

PROJECT: C.H.A.N.G.E.
6TH GRADE CURRICULUM
EPILEPSY

Unit	Objective	Concept
Epilepsy (Cont.)	Student can administer first aid to a person having a Grand Mal seizure.	The following steps should be taken when a person goes into a Grand Mal seizure: A. Remain calm. B. The person should not be restrained There is nothing that can be done to stop the seizure once it starts. It must run its course. C. The area around the person should be cleared so that the person does not injure himself on hard or sharp objects. The patient's movements should not be interferred with. D. Do not force anything between the teeth of the patient. If the mouth is already open, you might place a soft object, like a handerchief between the side teeth. E. A doctor need only be called if the seizure lasts more than ten minutes or if upon completion of the first seizure the person goes into another. F. When the seizure is over, the person should be allowed to rest if he or she needs to. G. The patient's parent or physician should be informed of the attack. There is no first aid necessary for petit mal or psychomotor seizures.

PROJECT: C.H.A.N.G.E.
6TH GRADE CURRICULUM
EPILEPSY

Unit	Objective	Concept
Epilepsy (Cont.)	Students are aware that most people with epilepsy are able to lead normal lives..	Sometimes, due to fear and ignorance, epileptics are over pitied, shunned, shoved aside and kept from doing what other persons do. This can cause them to have personality problems. Many have average to above average intelligence. Epileptics can hold down responsible jobs. Many can drive a car if the seizures are entirely under control and have been for at least two years (varies with state law). Epileptics may marry and have children but a geneticist or neurologist should be consulted to see what the risk factors are that a child could be born an epileptic. Usually, the risk is very low. Epileptics should be treated normally.

PROJECT: C.H.A.N.G.E.
6TH GRADE CURRICULUM
EPILEPSY

ACTIVITY:

Film: "Images of Epilepsy"

OBJECTIVE:

The students will know the three types of epilepsy and problems encountered by Epileptics.

MATERIALS:

Film: "Images of Epilepsy" (Department of Health, Education and Welfare and the State of Colorado Developmental Disabilities Council).

PROCEDURES:

After viewing the film discuss it using these questions:

1. What are the three types of seizures?
2. What problems did the students with epilepsy have with school?
3. What problems did they have with the other students?
4. How do you think a person with epilepsy should be treated?
5. How did you feel while watching the film?

PROJECT: C.H.A.N.G.E.
6TH GRADE CURRICULUM
EPILEPSY

ACTIVITY:

Article "Epilepsy" by Josephine Moss; Fact Sheet on Epilepsy from the pamphlets "Epilepsy School Alert"

OBJECTIVE:

Students know the symptoms and types of epilepsy and also learn what first aid measures should be used if a person has a seizure.

MATERIALS:

Article "Epilepsy" by Josephine Moss; Fact sheet on epilepsy from the pamphlet "Epilepsy School Alert"

PROCEDURE:

The teacher may:

1. Read the following reports to the class, or
2. Have them duplicated and allow the class to read the material.

Follow up either activity with the following discussion questions:

1. What is meant by a seizure?
2. When does a seizure occur?
3. How many people in the United States are known to have epilepsy?
4. How intelligent are people with epilepsy?
5. What kind of problems do people with epilepsy face in society?
6. Is epilepsy contagious?
7. If a person near you as a seizure, what should you do?
8. Review the three kinds of seizures. (psychomotor, petit mal grand mal and the characteristics of each).

FACTS ABOUT EPILEPSY

1. THE BRAIN

The brain is a complex organ, carefully protected inside the skull.

It is more complex than the largest computer. The brain regulates every body action from simple muscular activities such as walking, standing, and sitting, to more complex activities, such as playing a musical instrument, writing, drawing, etc. All sensations, such as sight, smell, hearing, etc., are received and interpreted in the brain. It even controls all inner workings of the body, such as the action of the heart, breathing and digestion.

It is made up of millions and millions of tiny units called cells.

All cells normally work with each other in smooth harmony and cooperation.

Different parts of the brain control different actions.

2. THE EPILEPTIC SEIZURE

Texts: "Epilepsy School Alert" - Pamphlets

A seizure occurs when a group of brain cells becomes overactive, discharges excess electrical energy, and the well-ordered cooperation within the brain breaks down.

Sometimes this is confined to one small part of the brain, and in some cases the whole brain is involved. This accounts for the various types of seizures which occur in different people.

3. PREVALENCE

Text: Answers to Questions....."

Approximately 4,000,000 persons in the United States are believed to have the disorder...and 80% of cases of epilepsy are seen in the first 19 years of life.

4. EPILEPSY AND THE RETARDED CHILD
EPILEPSY AND THE EMOTIONALLY DISTURBED CHILD

Most persons with epilepsy, both children and adults, are of average or above average intelligence, but some are handicapped by difficulties in intellectual function.

(TO THE TEACHER: You may find this article very useful for classroom reading and discussion. It can also be useful as the basis for a little booklet to be designed and illustrated by students. The author has been active in the School Alert Program of the Southwest Louisiana Chapter of the Epilepsy Foundation of America).

EPILEPSY

by Josephine Moss

Have you ever heard people talk about epilepsy? (ep-i-lep-si) Did you know what it meant?

Maybe they were talking about a person who had a "spell" or a "fit", and you wondered just what they meant. This may help you to understand.

You do know what it means to have a spell or a fit of sneezing, coughing or hiccuping. It means that your body makes certain movements which are rather violent and over which you have little or no control. You cannot stop these movements just by saying: "I'm going to stop sneezing" (or coughing or hiccuping.) It is something that takes hold of you; it seizes you. That word, "seizure," is one that is used often to describe epilepsy. They call them "epileptic seizures."

Is epilepsy a disease? Certainly not in the ordinary meaning of the word. Is sneezing a disease? Or coughing? No; these are signs that something is not right somewhere in our body. You may have some idea of what causes coughing, sneezing, hiccuping. It is more difficult to know what causes epilepsy; but we know it is a sign that something is bothering us somewhere.

When you sneeze the muscles of your face tighten up ("you make a face") and your body gives a jerk as the air is blown out like a little explosion. When you hiccup your chest and throat make jerking movements and your head snaps back a little with each hiccup. In the same way a person with an epileptic seizure will sometimes have jerking movements with the hands, face or body. How strong these movements are depends on how bad a spell you are having, just as with coughing or sneezing. Sometimes it is worse than others.

What can be done for epilepsy? Your mother takes you to a doctor, just as she would have if you had an extra bad fit of sneezing or coughing. The doctor examines you to find out what to do. Often a medicine will be prescribed that will help control the problem. It may not cure it, but it controls it. Just like when you have a bad allergy that makes you sneeze a lot. You take your medicine to prevent having a bad spell caused by something not being right somewhere in your body.

I am sure you would like to know what to do to help a person who is having a seizure. Don't try to give him any medicine you may happen to have, because it may be harmful to him. If no one is there to take charge, it would be well for you to report it to the parent or teacher or anyone who might know more about it than you do.

As you look at him you may become a bit frightened at his jerky movements or unusual positions. Don't try to hold him still or stop his movements. This will not help him any more than trying to stop a man from coughing by holding his mouth closed.

Sometimes, a person with a seizure will faint. That means he "passes out" for a while. While he is unconscious he could hurt himself. Try to make him comfortable. Put something soft (like a pillow) under his head. In a little while he will come to, and will be happy when he opens his eyes to see you smiling at him. It frightens a person to faint; so you need to show him with your smile that everything is all right.

Most of the time a person who has a seizure will be O.K. again in a little while, and will soon join you in your work, play or even mischief.

In cases where the intellectuat function is hampered, it is more than likely to be caused by some brain damage--the same damage that may be causing the seizures. The brain damage is the cause of the seizures and the retardation. The person is not retarded because he has epilepsy. Both the epilepsy and the retardation are twin results of the same damage.

Any problems of this type are individual with each person, and may be the cause of poor performance in specific areas of function. In the case of a child, it can result in learning difficulties.

Children who regularly suffer from "petit mal" seizures (which appear to be brief lapses in awareness) may experience difficulty in concentrating in class. Quite often the child is accused of day-dreaming when in reality the child is experiencing frequent "petit mal" seizures. Like other forms of the disorder, "petit mal" can often be eliminated or greatly reduced by proper medications.

Emotional disturbances or difficult behavior in a child with epilepsy are usually not due to the seizures themselves, but due to the problem which arise in the child's normal development. They may be related to the difficulties which the seizures create in the person's daily life. Occasionally, the medication that prevents seizures has some behavioral side effects.

The confusion in the mind of the person with Epilepsy as a result of a seizure (his not being aware of what occured during the time of the seizure) may be a factor in forming his attitude towards life and his behavior with other people.

He may feel he is not a part of the normal environment. This could be formed by his own thinking, or by actions on the part of others. There are many strange misconceptions about epilepsy, due to the fact that people are generally uninformed about it. This can lead to ridicule or avoidance by his friends and associates, which can lead to insecurity and resentment in the person with epilepsy.

PROJECT: C.H.A.N.G.E.
6TH GRADE CURRICULUM
EPILEPSY

ACTIVITY:

Research Project: Famous People with Epilepsy

OBJECTIVE:

The students become aware of the enormous intelligence exhibited by many epileptics.

MATERIALS:

Fact sheet "Epilepsy in History" from the pamphlet "Epilepsy School Alert"

PROCEDURE:

Read the fact sheet to the students or run them off so every student has a copy. Discuss the sheet with the class. Allow the students to choose one or more people and have them write a report on that person's life. Share the reports with the class.

PROJECT: C.H.A.N.G.E.
6TH GRADE CURRICULUM
EPILEPSY

EPILEPSY IN HISTORY

As proof of the normal mentality of the average person with epilepsy, the following names can be presented to the students. Each of these persons is thought to have had a history of epilepsy. If any of these people have been studied in connection with other subjects, it should be noted.

RULERS AND STATESMEN

Alexander the Great
Alfred the Great
Napoleon Bonaparte
Julius Caesar
Charles V of Spain
Louis XIII of France
Paul I of Russia
Peter the Great
William Pitt

POETS, AUTHORS, PHILOSOPHERS

Lord Byron
Dante
Guy de Maupassant
Charles Dickens
Fyodor Dostoyevsky
Gustave Flaubert
Socrates
Blaise Pascal
Moliere

MUSICIANS AND COMPOSERS

George Frederick Handel
Robert Schumann
Peter Tchaikovski
Nicolo Paganini

RELIGIOUS LEADERS

Buddha
Martin Luther
St. Paul

ARTISTS

Vincent Van Gogh
William Morris

SCIENTISTS

Alfred Nobel

ENTERTAINERS

JOHNNY CARSON

Reference to the above names will probably spark some comment from the students and can be grounds for a short discussion on the idea that many of these people were close to genious and their minds were obviously not damaged by epilepsy.

PROJECT: C.H.A.N.G.E.
6TH GRADE CURRICULUM
EPILEPSY

ACTIVITY:

Research Project: Science unit on the brain and nervous system.

OBJECTIVE:

Students learn the function of the brain as it relates to epilepsy.

MATERIALS:

Science Unit on the brain and nervous system from the "Epilepsy School Alert" pamphlet.
Reference materials.

PROCEDURE:

Read the science unit on the brain and nervous system to the class for discussion and to stimulate interest in the research projects suggested. Completed projects can be shared with the class.

Research suggestions:

Functions of the nervous system - in man and in animals.

Sodium/potassium balance in cell.

Function of the cell membrane.

Display of similarities/differences between nerve cells and other cells.

Demonstration (by model or display) of current knowledge about electrical discharge of neurons, synapses, EEG research, areas of the brain, human brain centers, and animal brain centers.

Conduction of electrical energy in the cell.

Transmission of electrical energy.

Cell metabolism.

Demonstration of chemical effects on the cell.

PROJECT: C.H.A.N.G.E.
6TH GRADE CURRICULUM
EPILEPSY

The following material concerning the structure and cellular activity of the brain and the nervous system may be useful in PHYSICS, BIOLOGY, or CHEMISTRY classes. It is not intended to supply complete information but to present a short digest of information to include in your more detailed presentation of the subject.

THE BRAIN AND THE NERVOUS SYSTEM:

What is the brain? It is a complex organ which controls human activity by the reception, interpretation, and transmission of minute charges of electrical energy. It controls all activity, all sensation, from hunger to pleasure, from breathing to the ability to play chess.

What is the brain composed of? It is made up of about 30 billion neurons (nerve cells). They are interconnected in a complex series of relationships so that what affects one may be passed on to another. Brain cells do not multiply like other cells in the body. An individual is born with all the brain cells he will ever have. With age they may deteriorate and die, but because of sheer numbers the effect is not usually noticeable until extreme old age, and sometimes not even then.

Neurons in different areas of the brain affect different aspects of body function. Some control emotions, other areas involve vision, speech, hearing, touch, memory and thought. Scientists have discovered that electrical stimulus of different areas of the brain results in the individual experiencing sensations, or in body movements depending on the area of the brain involved.

How do brain cells work? The manufacture and transmission of electrical energy is the key to the function of the brain and the nervous system. Nerve cells are constructed to pass on electrical impulses from one to the next at very high speeds, to report stimuli to the brain.

How do scientists find out about electrical signals? Neurons in the brain discharge electrical energy in regular bursts, like waves. These are picked up by electrodes (tiny wires) pasted to the scalp, and a written record in the form of wavy lines is reproduced by an electroencephalograph (EEG). The readings vary characteristically depending on whether the person is alert, relaxed, drowsy or asleep.

Voltages in the brain are minute. It has been estimated that it would take the combined electrical energy picked up from the 60,000 scalps to light a single small flashlight!

How are brain cells affected by epilepsy? An epileptic seizure is the visible sign that brain cells are firing out of the regular sequence, and causing neighboring cells to discharge also. Causes for this sudden irregular discharge are still being investigated by scientists. The brainwave on an EEG during a seizure is different from basic patterns. When the seizure is over, the brain waves return to normal.

Discussion: During a seizure, there may be involuntary movements of arms and legs, unusual vocal sounds, muscle contractions. Why?

What does a brain cell look like? The invention of the electron microscope has enabled scientists to "see" the different parts of a neuron, Basically, it is a single jelly-like cell, covered with thin membrane. At one end are the DENDRITES, tiny, furry-looking branches that pick up electrical impulses. At the other end is the AXON, a thin bundle of fibres that transmits the impulse to the dendrites of the next cell.

How does the electrical impulse move from one cell to the next? The impulse is picked up by the dendrite, moves along the polarized surface of the membrane and on to the axon. Between cells, there is a tiny gap, called the SYNAPSE or SYNAPTIC CLEFT. This has been described as the decision-making center for the cell. Here the impulse is either passed on, probably by minute quantities of chemicals which flow across the synapse, or it is stopped. Although some cells have their own "feedback" system that inhibits the passage of impulses, in most the current moves only in one direction. It is believed that some cells always pass on the impulse, and others always inhibit it.

Discussion: Synapses have been described as circuit breakers. Why?

Where does the electrical energy in a nerve cell come from?

It comes from the metabolism of the cell, where enzymes break down glucose molecoles, releasing the energy that bound them together. Excess energy is stored in phosphates also present in the cell -- a kind of living battery with power to spare for sudden emergencies, when the body needs more than usual.

Discussion: Vitamin deficiencies and the action of certain chemicals can result in brain disorders.

Do different kinds of stimuli cause variations in electrical energy?

Stimuli vary in intensity (e.g., colors are different, a stove can be cold, warm or hot, a sound loud or soft, etc.) but the impulse through the cell remains the same. The impulse through the cell remains the same. The frequency of the impulse varies, and scientists believe that this is the informational code that conveys variations in the stimulus to the brain.

Discussion: This difference has been compared to the difference between AM and FM radio. Why?

Class Discussion and/or Assignment:

Napoleon Bonaparte and Martin Luther are believed to have had epilepsy. Modern psychologists assign them IQ's in the genius range. What does this indicate about brain processes, intelligence, and the phenomenon of epilepsy?

Discuss the similarities and differences between a neuron and other body cells.

Comparisons are often made between computers and the brain. Have a member or group in the class report on how a computer makes decisions and transmits electrical energy. What are the similarities and differences?

Science Projects:

You may have some students in your class who can work independently on more advanced projects, individually or in groups. Below is a list of some research areas in neurology, and relating to epilepsy as a neurological condition. You may wish to add other suggestions.

We hope that some bright, motivated youngster will undertake work in these areas. We want to get young people interested in the challenge and possibilities of neurological research.

Your local EFA chapter would be interested to know about such projects, and suggests that you register them through a letter or telephone call. We would also like to have a short summary of the results when the project is completed. Such work would qualify the youngster for an Epilepsy Foundation of America Certificate of Merit for his work.

Epilepsy Foundation of America, MW Office
6 No. Michigan Ave.
Chicago, Ill. 60602 332-6888

PROJECT: C.H.A.N.G.E.
6TH GRADE CURRICULUM
EPILEPSY

ACTIVITY:

Epilepsy Crossword

OBJECTIVE:

The students will learn the terminology used in the study of epilepsy.

MATERIALS:

Epilepsy Crossword

PROCEDURE:

Have the children use encyclopedias and other available reference materials to look up the information needed to complete the puzzle. When the children have completed the puzzle, go over the puzzle with the class checking the answers.

ANSWER KEY

The answers to the Epilepsy Crossword Puzzle are:

ACROSS

1. seizures
2. electroencephalogram
3. idiopathic
4. grand mal
5. petit mal
6. psychomotor

DOWN

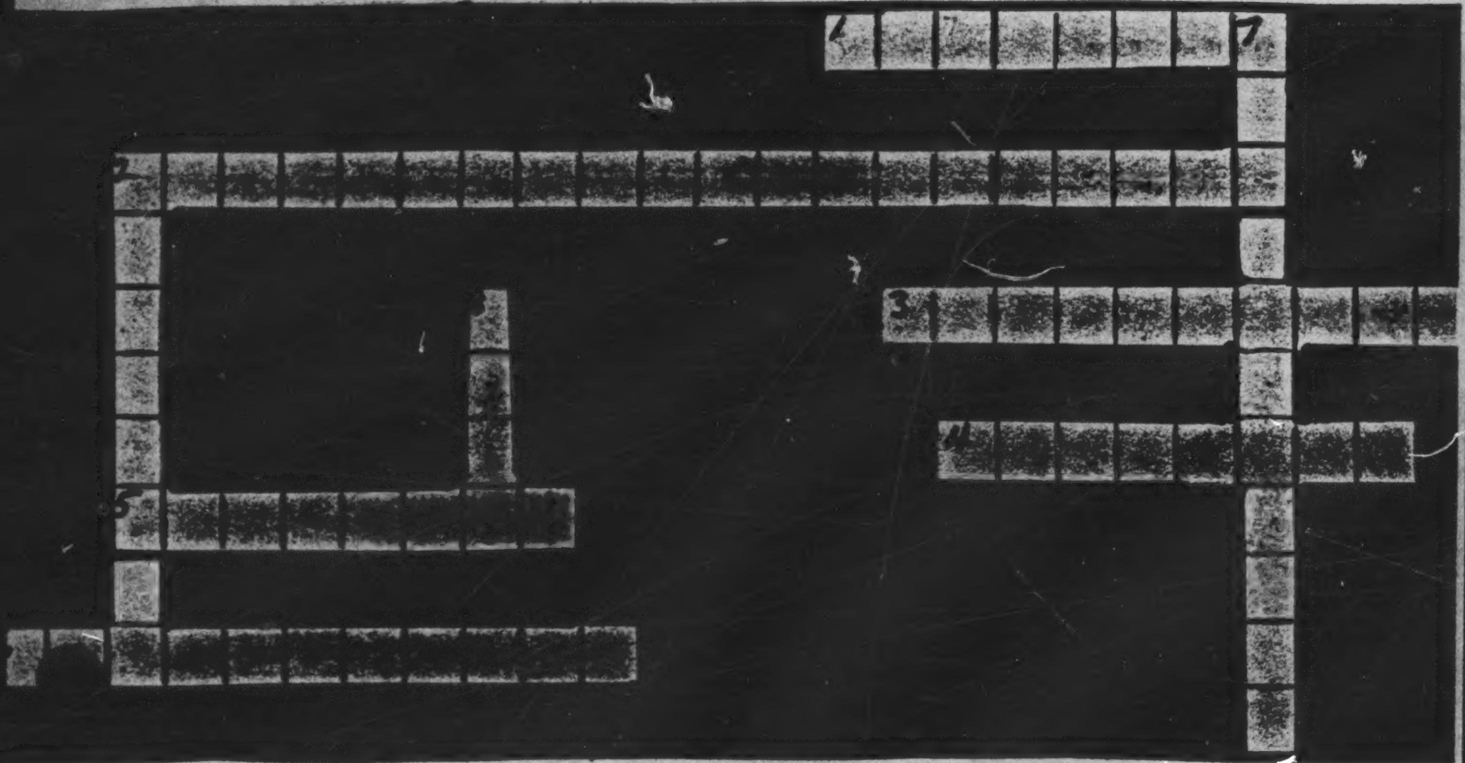
2. epilepsy
7. symptomatic
8. aura

PROJECT: C.H.A.N.G.E.
6TH GRADE CURRICULUM
EPILEPSY CROSSWORD PUZZLE

E-10

NAME: ______________________________________

Directions: Complete the crossword puzzle by using encyclopedias and other available reference materials.



ACROSS

1. Result from an electrical imbalance in the brain causing jerky movements. Staring spells or repetitive movements.

2. a device used for determining whether or not a person has epilepsy.
3. a type of epilepsy with no known cause.
4. A type of seizure in which a person loses consciousness, the body stiffens, the limbs, trunk and face jerk rapidly, and drooling may occur.

5. A type of seizure which may be characterized by staring spells, rapid blinking of the eyes, and sometimes small twitching movements.

6. A type of seizure in which a person may repeat a movement over and over (eg. plucking at his or her clothes or hair.

DOWN

2. A disease characterized by seizures.
7. A type of epilepsy in which the cause is known (eg. brain injury).
8. A warning sometimes experienced before a seizure such as an unpleasant odor, sound or feeling.

PROJECT: C.H.A.N.G.E.
6TH GRADE CURRICULUM
EPILEPSY

ACTIVITY:

Book - Epilepsy by Dr. Alvin Silverstein and Virginia B. Silverstein

OBJECTIVE:

Students can further their understanding of epilepsy.

MATERIALS:

Book - Epilepsy by Dr. Alvin Silverstein and Virginia B. Silverstein

PROCEDURE:

The teacher may want to read either all or part of the book to the class. The teacher may want to use the book as supplementary reading for those students who are interested in further research on epilepsy. If the book is used by a student, they might be encouraged to prepare a report. The report should include the title, author and a brief summary. The report may be shared withe the class.

PROJECT: C.H.A.N.G.E.
6TH GRADE CURRICULUM
EPILEPSY

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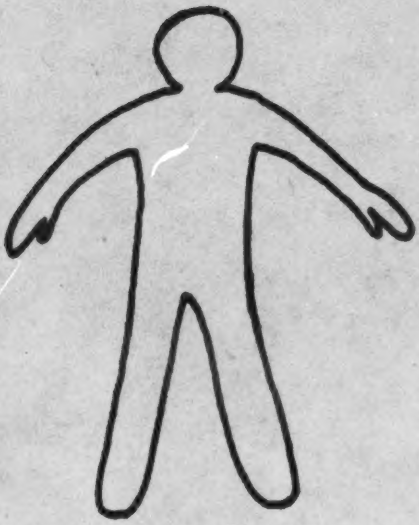
BASIC ANATOMY



INTERMEDIATE LEVEL

PROJECT: C.H.A.N.G.E.
6TH GRADE CURRICULUM
INTRODUCTION: BASIC ANATOMY

The purpose of this unit is for students' general knowledge of the nine basic life systems of the body and their function. This unit is in preparation for the study of physical handicaps which will be studied next.

The objectives and concepts to be studied in this unit are:

Unit	Objective	Concept
Basic Anatomy	The students can identify the nine basic life systems, their function, and main components.	A system consists of a group of organs which work together in a well coordinated manner to execute some complicated function. Each organ in a system has a special job to do, but each job is only a part of the main task of the system. There are nine basic life systems. The basic life systems are the skeletal, muscular, nervous, circulatory, respiratory, digestive, urinary, reproductive, and endocrine systems. The functions of each system are: A. The skeletal system provides support, protection, and leverage. It furnishes support for the body as much as steel girders furnish a supporting framework for a modern building. The hard, bony "boxes" afford protection for the delicate vital organs enclosed by them. The bones provide places of anchorage for the muscles to pull against, and thereby help to produce movements of various body parts. The human skeleton is made up of 206 bones. B. The function of the muscular system is movement, which includes both locomotion and motion within a given area. C. The central nervous system consists of the brain, spinal cord, and the spinal plexus (a network of nerves. The central nervous system controls all the body functions and sensations.

PROJECT: C.H.A.N.G.E.
6TH GRADE CURRICULUM
INTRODUCTION: BASIC ANATOMY

Unit	Objective	Concept
Basic Anatomy (Cont.)	The students can identify the nine basic life systems, their function, and main components (Cont.)	D. The circulatory system transports various substances, protects against microbes, and aids in heat regulation. E. The respiratory system makes it possible for blood to exchange gases with air. F. The digestive system alters the chemical and physical composition of food so that it can be absorbed and utilized by body cells. G. The urinary system secretes urine and eliminates it from the body. H. The reproductive system produces a new individual. I. The endocrine system secretes substances called hormones which furnish a means of communication between parts of the body, thereby making possible control and integration of various activities. The main components of each system are: A. The skeletal system consists of all the bones of the body, plus the joints formed by their attachments to each other. B. The muscular system consists of all the muscles of the body - those attached to the bones, those helping to make up the walls of the internal organs, and that which composes the wall of the heart. C. The nervous system consists of the brain, the spinal cord, and the nerves.

PROJECT: C.H.A.N.G.E.
6TH GRADE CURRICULUM
INTRODUCTION: BASIC ANATOMY

Unit	Objective	Concept
Basic Anatomy (Cont.)	The students can identify the nine basic life systems, their function, and main components (Cont.)	D. The circulatory system consists of the heart, blood vessels, and the lymphatic vessels. E. The respiratory system consists of the nose, pharynx, larynx, trachea, bronchi, and lungs,. F. The digestive system consists of the organs which form the alimentary canal (mouth, pharynx, esophagus, stomach, and intestines) and several other organs which either lie in the alimentary canal or open into it, thus constituting the accessory digestive organs (teeth, tongue, salivary glands, pancreas, liver, gall bladder, and vermiform appendix). G. The urinary system consists of two kidneys, two ureters, one bladder, and one urethra. H. The reproductive system consists of the male and female reproductive organs. I. The endocrine system consists of the pituitary, thyroid. parathyroid, and adrenal glands, gonads (testes or ovaries), and the islands of Langerhans, in the pancreas. No system is an island onto itself; to have a properly functioning body, each system, each organ, intermingles and reacts to the whole.

PROJECT: C.H.A.N.G.E.
6TH GRADE CURRICULUM
BASIC ANATOMY

ACTIVITY:

Charts: "The Human Body Systems for Sensing and Moving"

#1 - #2 - #3 - #4 - #5 and #8

OBJECTIVE:

The students become familiar with the nine basic life systems, their functions and their main components.

PROCEDURE:

Explain to the class that there are nine basic life systems. The Skeletal, muscular, central nervous, circulatory, respiratory, digestive, urinary, reproductive and endocrine.

Write all the systems on the board. Have the class copy the list and leave about four lines in between each system so later they can fill in some of the organs belonging to each system.

Then using the charts from "The Human Body Sensing and Moving" kit, display each chart one at a time, reading the important organs and functions that go with each system, from the back of the chart.

Students should fill in on their papers as many organs as they can in relation to each system. This information should then be saved for use with the Basic Life System Crossword Puzzle.

There are no charts on the The respiratory, digestive, urinary and reproductive systems. Students may use any reference material available in their learning center or classroom to fill in organs for those systems.

PROJECT: C.H.A.N.G.E.
6TH GRADE CURRICULUM
BASIC ANATOMY

ACTIVITY:

Basic Life Systems Crossword Puzzle.

OBJECTIVE:

The students learn the nine basic life systems and the organs that compose them.

MATERIALS:

Basic Life Systems Crossword Puzzle
Sheet listing basic life system and organs the students compiled in lesson.

PROCEDURE:

Using the written assignments from the Chart: "Human Body System for Sensing and Moving", have the students complete the puzzle.

ANSWER KEY:

The answers for Basic Life Systems Crossword Puzzle are:

ACROSS

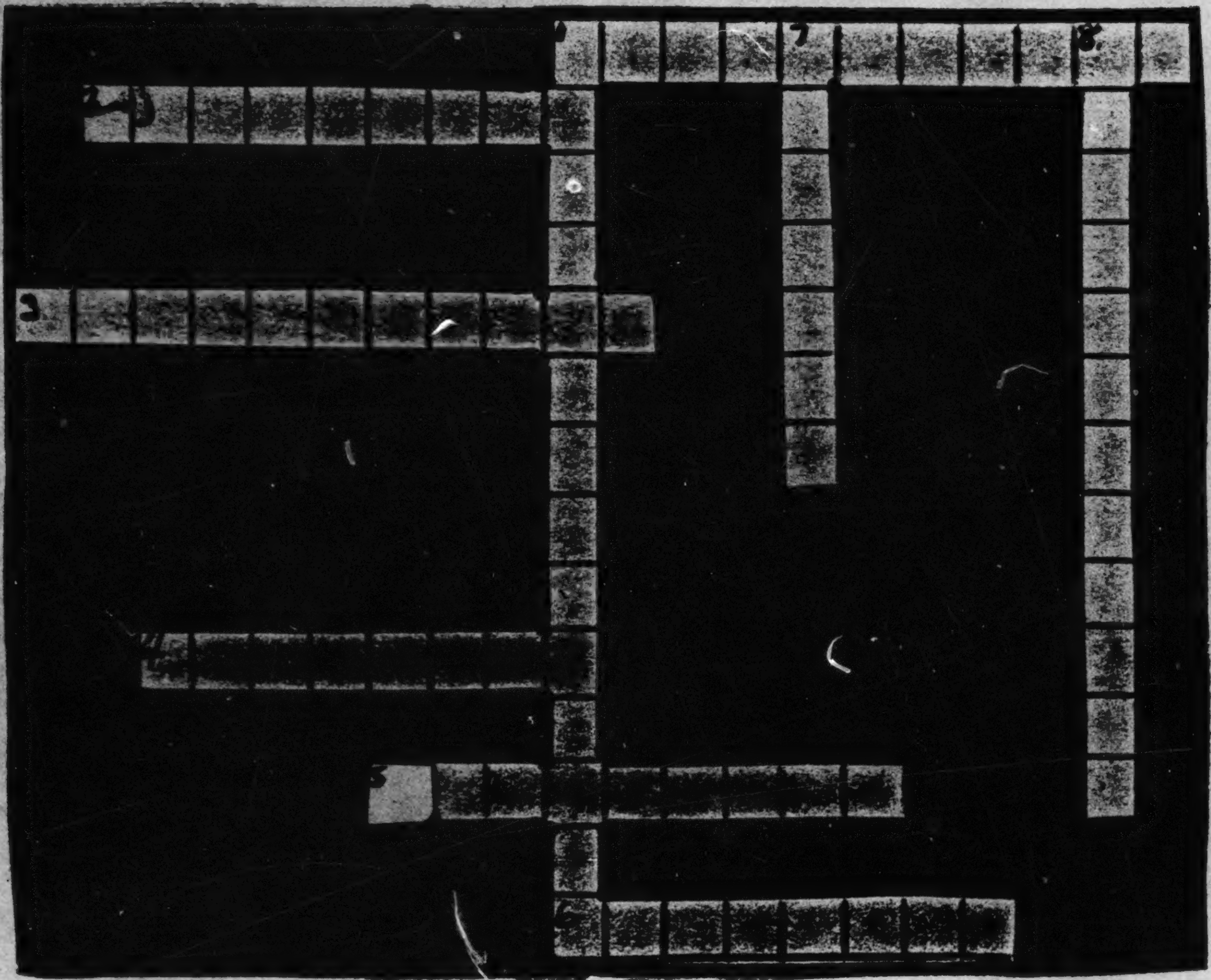
1. circulatory
2. digestive
3. respiratory
4. muscular
5. endocrine
6. skeletal

DOWN

1. Central Nervous
7. urinary
8. reproductive

PROJECT: C.H.A.N.G.E.
6TH GRADE CURRICULUM
BASIC ANATOMY

BASIC LIFE SYSTEMS CROSSWORD



ACROSS

1. Consists of the heart, blood vessels and the lymphatic vessels.
2. Consists of the mouth, pharynx, esophogus, stomach, intestines and several supporting organs.
3. Consists of the nose, trachea, lungs and other organs.
4. Consists of all the muscles attached to the bones, those helping make up the walls of the internal organs and those which compose the wall of the heart.
5. Consists of the pituitary, throid adrenal glands, islands of Langerhans and other glands.

DOWN

1. Consists of the brain, spinal cord, and the nerves.
7. Consists of two kidneys, two ureters, one bladder and one urethra.
8. Consists of the male and female reproductive organs.

ACROSS

6. Consists of all the bones of the body plus the joints formed by their attachments to each other.

PROJECT: C.H.A.N.G.E.
6TH GRADE CURRICULUM
BASIC ANATOMY

ACTIVITY:

Filmstrip "The Skeletal and Muscular System"

OBJECTIVE:

The students learn the various muscles, bones and their functions.

MATERIALS:

Filmstrip and casette "The Skeletal and Muscular Systems"
(Walt Disney Educational Media Co.)

PROCEDURE:

After viewing the filmstrip discuss by using the following questions:

1. What are bones made out of?
2. How many bones are there?
3. What holds the joints together?
4. Why is posture important?
5. How do bones heal?
6. Name some of the different bones and what they do.
7. What does bone marrow do?
8. How does the body get calcium?
9. What should a person do if they think they have a broken bone?
10. How do the bones move?
11. Why is exercise important?
12. How do the muscles work?

PROJECT: C.H.A.N.G.E.
6TH GRADE CURRICULUM
BASIC ANATOMY

ACTIVITY:

Filmstrip - "The Skeletal and Muscular Systems"

OBJECTIVE:

The students know the various muscles and bones of the body and their functions.

MATERIALS:

The filmstrip and cassette "The Skeletal and Muscular Systems" (Encyclopedia Britannica Corp.).

PROCEDURE:

After viewing the filmstrip, discuss using the following questions.

1. What two systems make our bodies able to move?
2. What kind of skeletons do human beings have?
3. How many bones does a human being have?
4. What are the main parts of the skeleton?
5. What two jobs does the skeleton do for the body?
6. How are babies' bones different from the adults bones?
7. Where is cartilage located in the adult skeleton?
8. What are the places where bones meet called?
9. Name the different kinds of joints?
10. What is the inside of a living bone like?
11. Name the three types of muscle tissue?
12. How do muscles produce movement?
13. How do both heart muscles and smooth muscles act?
14. How are striated muscles attached?
15. Almost everywhere in the body - how many muscles are needed to move one part?
16. Do we have more muscle cells when we become adults?
17. What should we do to keep our skeletal and muscular systems healthy?

PROJECT: C.H.A.N.G.E.
6TH GRADE CURRICULUM
BASIC ANATOMY

ACTIVITY:

Film Strip: "HUMAN RESPIRATION".

OBJECTIVE:

The students know the organs used in breathing.

MATERIALS:

Filmstrip and cassette "HUMAN RESPIRATION" (Encyclopedia Britannica Corporation)

PROCEDURE:

After viewing the filmstrip, ask the following questions for discussion.

1. Why is oxygen necessary to the body?
2. What two systems work together for respiration to take place?
3. What gases make up the air we breathe?
4. What muscles help us breathe?
5. Do the lungs have muscles?
6. Why is it better to breathe through the nose than the mouth?
7. What prevents food from getting into the air passages?
8. Where do the circulatory system and the respiratory system come together?
9. Do our bodies always need the same amount of oxygen?
10. Is breathing a conscious or unconscious activity?
11. Why can't we hold our breath for a long time?
12. What are some causes of respiratory diseases?

PROJECT: C.H.A.N.G.E.
6TH GRADE CURRICULUM
BASIC ANATOMY

ACTIVITY:

Book Reports: How Your Body Works and Built to Survive
The Respiratory System and Circulatory Systems

OBJECTIVE:

Further study for those students who have a high level of interest in the body and its functioning.

MATERIALS: BOOKS: The Respiratory System by Silverstein & Silverstein

Books:
Built To Survive by Anne Terry White and Gerald L. Lietz.
Circulatory Systems by Silversein & Silversein

PROCEDURE:

After interested students have read the books, encourage them to write a book report. The report should include the title, author and a brief summary. These reports may be shared with the class.

PROJECT: C.H.A.N.G.E.
6TH GRADE CURRICULUM
BASIC ANATOMY

ACTIVITY:

Circulation Game

OBJECTIVE:

To reinforce student knowledge of the Circulatory System, its function and parts.

MATERIALS:

Circulation Game (Teaching Concepts, Inc.)

PROCEDURE:

The directions to the game are included in the box. This game may be played by students as a free time activity when their work is completed.

PROJECT: C.H.A.N.G.E.
6TH GRADE CURRICULUM
BASIC ANATOMY

Activity:

Chart and worksheet on the circulatory system in the kit Inside Me.

Objectives:

To enable the students to locate and define parts of the circulatory system.

Materials:

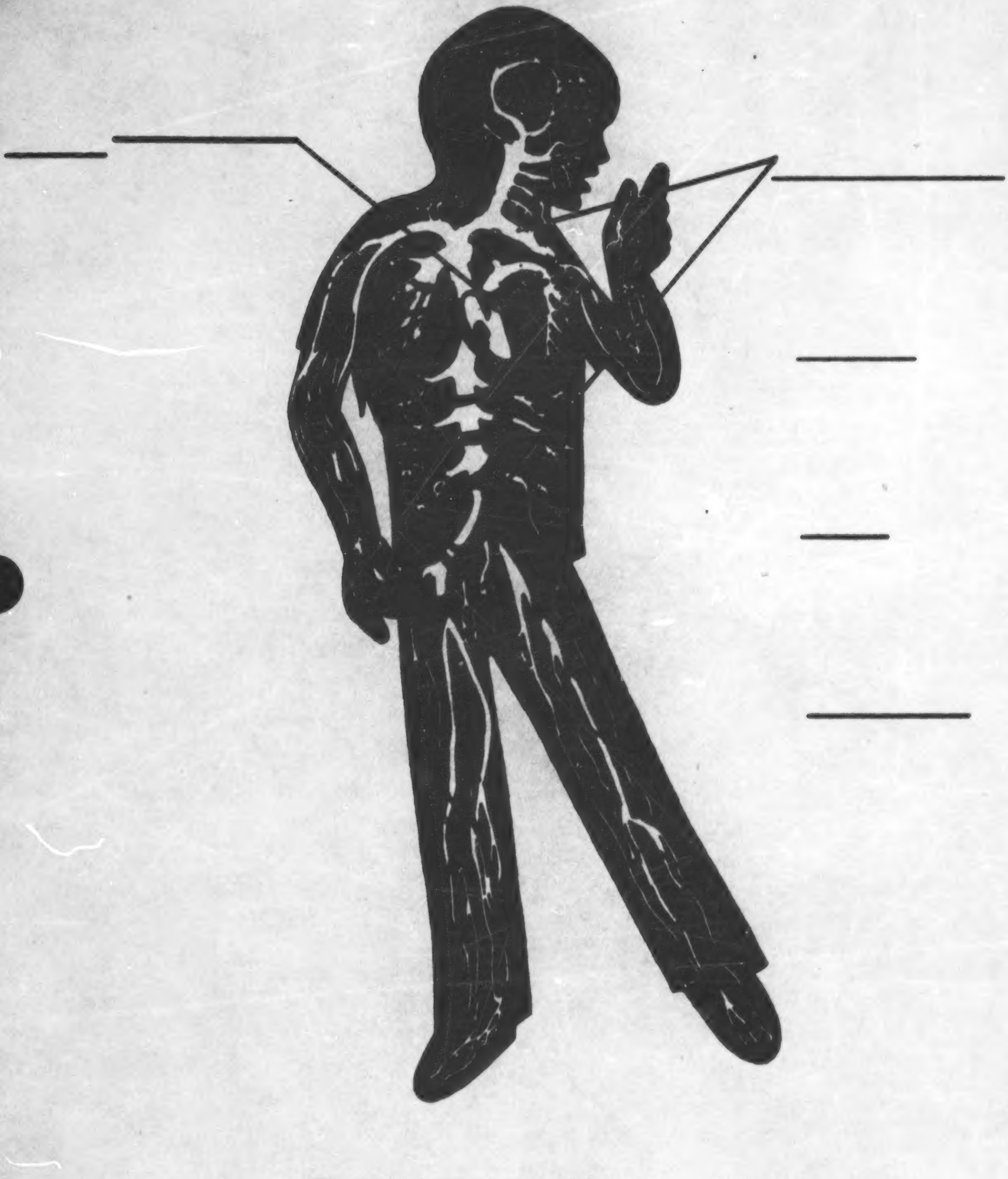
Chart and worksheet on the circulatory system from the kit Inside Me. (Developmental Learning Materials. Niles, Ill. 1980)

Procedure:

Copy the worksheet on the circulatory system. Teacher should hold up the chart showing the girl with the bandaged finger while reading the background information on p. 12 of the manual. The teacher should then turn the chart over and go over the labelled parts with the class. Then the worksheets should be distributed and the class allowed to label the parts of the circulatory system.

____________________ SYSTEM

the system that moves blood around and around and around throughout your body



Blood Vessels **Veins** **Arteries**

Capillaries **Circulatory** **Heart**

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PROJECT: C.H.A.N.G.E.
6TH GRADE CURRICULUM
BASIC ANATOMY

Activity:

Chart and worksheets on the Respiratory System in the kit Inside Me.

Objectives:

To enable the students to locate and define parts of the Respiratory System.

Materials:

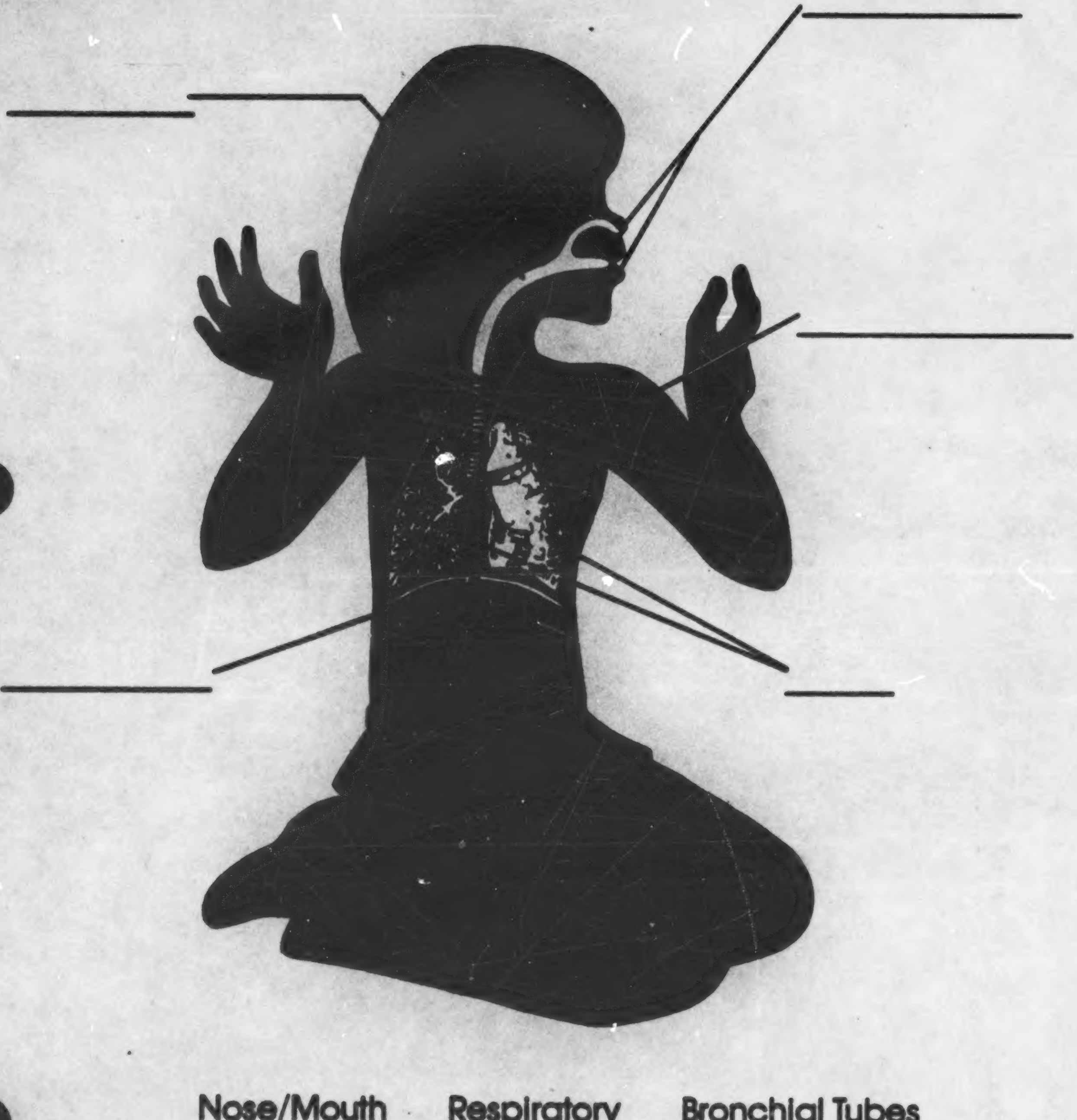
Chart and worksheet on the Respiratory System from the kit Inside Me. (Developmental Learning Materials, Niles Ill. 1980)

Procedure:

Copy the worksheet on the respiratory system. Teacher should hold up the chart showing the girl blowing on the dandelion while reading the background information on p.11 of the Manual. The teacher should then turn the chart over and go over the labelled parts with the class. Then the worksheets should be distributed and the class allowed to label the parts of the respiratory system.

________________ SYSTEM

the system that allows you to breathe



Nose/Mouth **Respiratory** **Bronchial Tubes**

Diaphragm **Windpipe** **Lungs**

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PROJECT: C.H.A.N.G.E.
6TH GRADE CURRICULUM
BASIC ANATOMY

ACTIVITY:

Chart and worksheets on the muscular system in the kit Inside Me.

OBJECTIVES:

To enable the students to locate and define parts of the Muscular System.

MATERIALS:

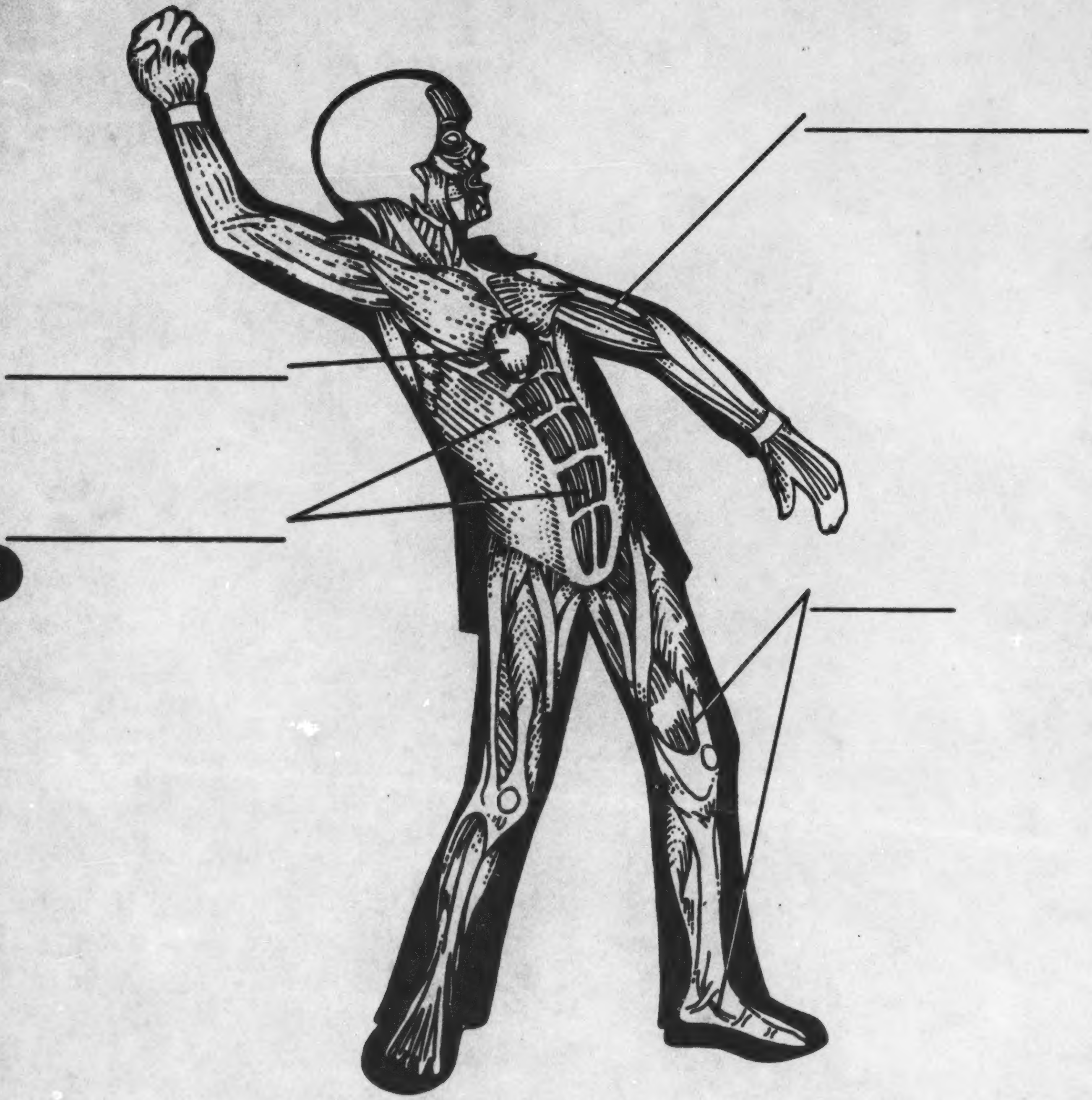
Chart and worksheets on the Muscular System from the kit Inside Me (Developmental Learning Materials, Niles Ill. 1980)

PROCEDURE:

Copy the worksheet on the muscular system. The teacher should then hold up the chart showing the boy getting ready to throw the ball while reading the background material on P.9 of the Manual. The teacher should then turn the chart over and go over the labelled parts with the class. The worksheets should then be distributed and the class allowed to label the parts of the muscular system.

________________ SYSTEM

the system that allows your body to move



Cardiac Muscle   Tendons   Muscular

Skeletal Muscles   Smooth Muscles

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PROJECT: C.H.A.N.G.E.
6TH GRADE CURRICULUM
BASIC ANATOMY

ACTIVITY:

Chart and worksheets on the Skeletal System in the kit Inside Me.

OBJECTIVES:

To enable the students to locate and define parts of the Skeletal System.

MATERIALS:

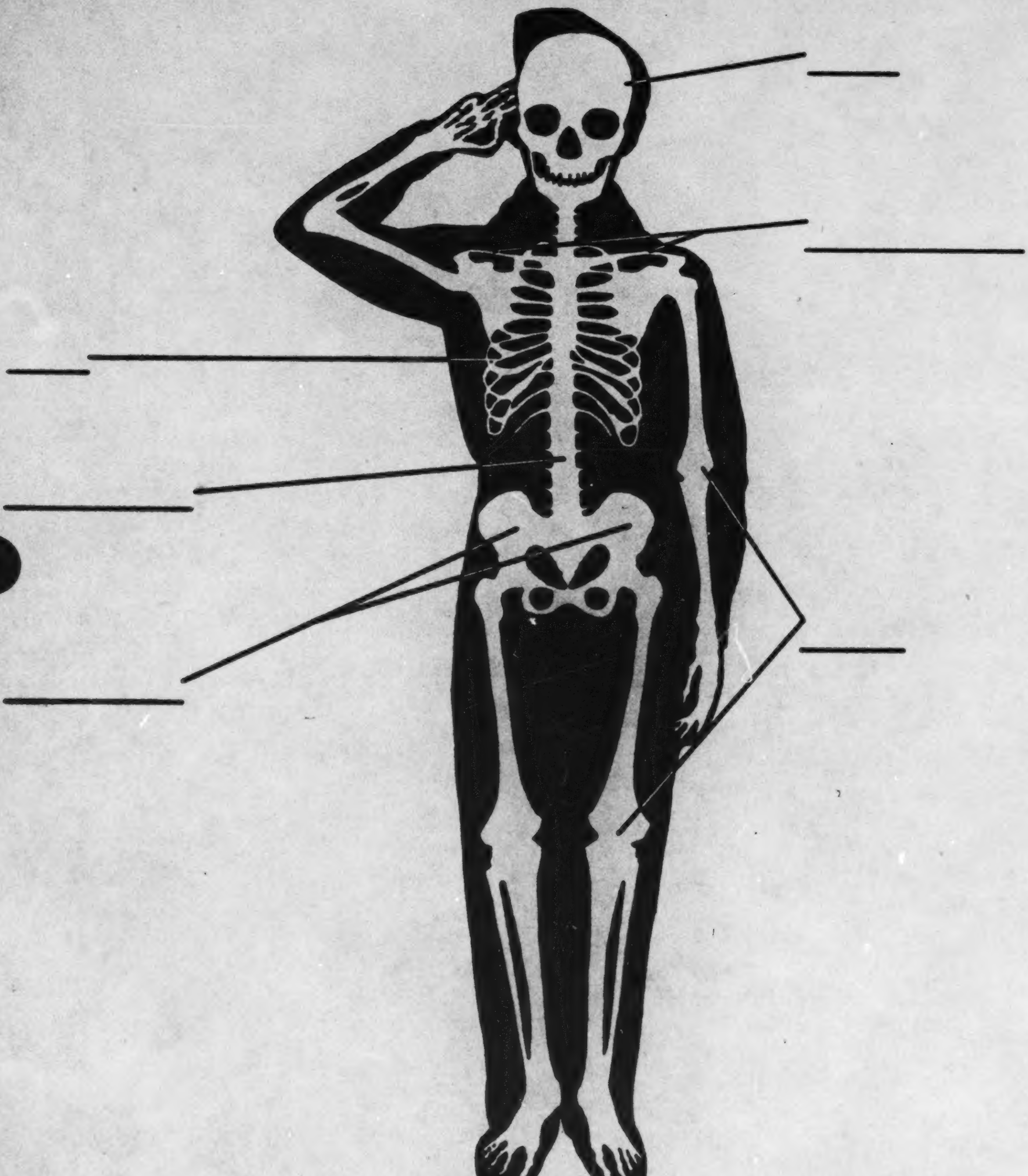
Chart and worksheet on the skeletal system from the kit Inside Me (Developmental Learning Materials, Niles Ill. 1980.)

PROCEDURE:

Copy the worksheet on the skeletal system. The teacher should then hold up the chart showing the boy scout while reading the background material on p.8 of the manual. The teacher should then turn the chart over and go over the labelled parts with the class. The worksheets should then be distributed and the class allowed to label the parts of the skeletal system.

____________ SYSTEM

the system that is a frame for your muscles, protects your soft organs, and gives your body its shape.



Collarbones Backbone Skeletal

Hipbones Skull Ribs Joints

©DLM 1980 9819

PROJECT: C.H.A.N.G.E.
6TH GRADE CURRICULUM
BASIC ANATOMY

ACTIVITY:

Chart and worksheets on the Digestive System in the kit Inside Me.

OBJECTIVES:

To enable the students to locate and define parts of the digestive system.

MATERIALS:

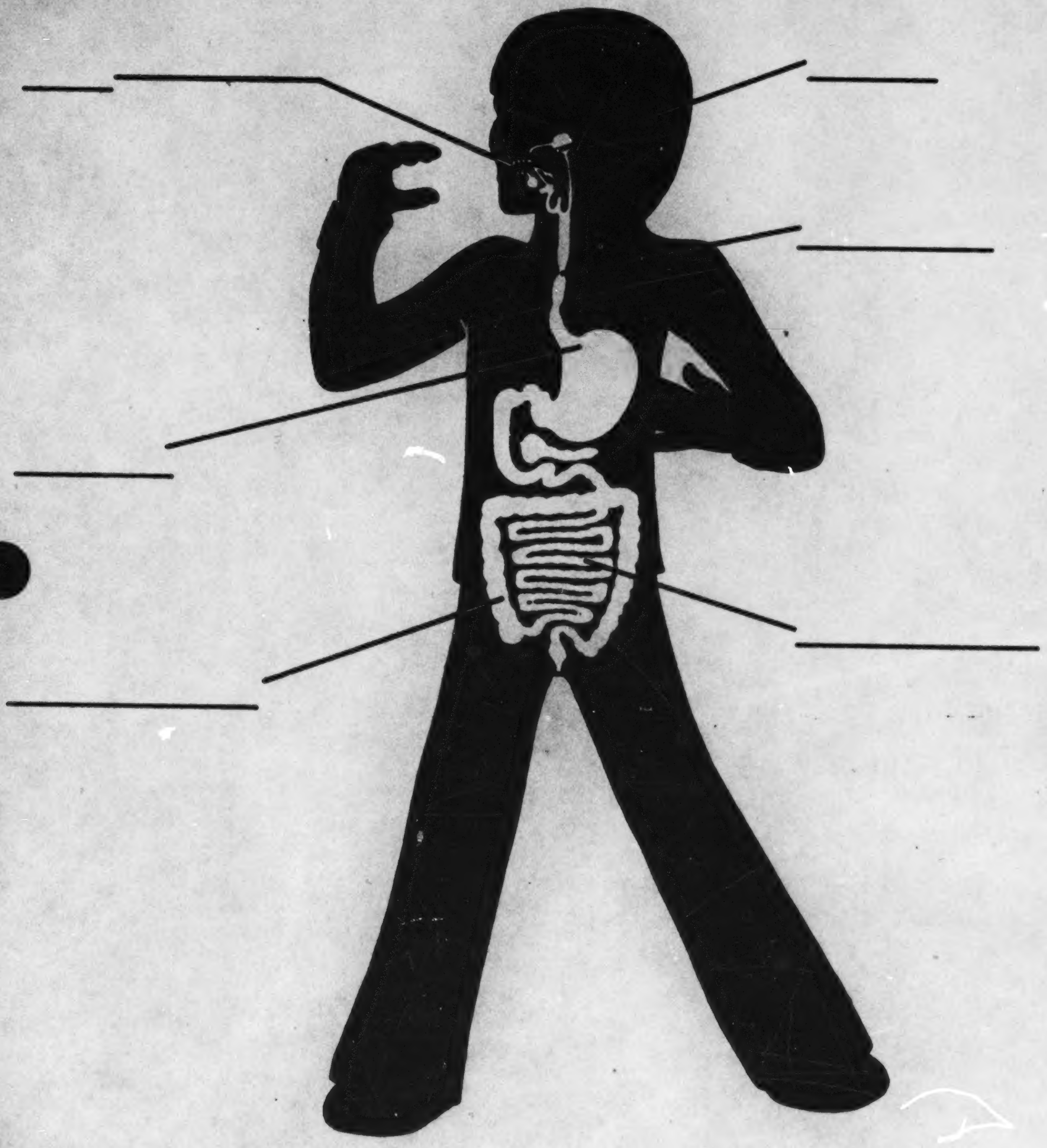
Chart and worksheet on the digestive system from the kit Inside Me (Developmental Learning Materials, Niles Ill. 1980)

PROCEDURE:

Copy the worksheet on the respiratory system. The teacher should hold up the chart showing the boy eating the hot dog while reading the background information of p.10 of the manual. The teacher should then turn the chart over and go over the labelled parts with the class. Then the worksheets should be distributed and the class allowed to label the parts of the digestive system.

______________SYSTEM

the system that breaks food down to be used by your body



Tongue Stomach Large Intestine Teeth

Digestive Esophagus Small Intestine

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PROJECT: C.H.A.N.G.E.
6TH GRADE CURRICULUM
BASIC ANATOMY

ACTIVITY:

Research project on one of the nine basic life systems.

OBJECTIVE:

Students gain in depth knowledge of one of the nine basic life systems.

MATERIALS:

Reference material from learning center/library on physiology

PROCEDURE:

Have students select one basic life system to research. Students may select 1) circulatory system 2) respiratory system 3) digestive system 4) urinary system 5) reproductive system 6) endocrine system 7) skeletal system 8) muscular system or the 9) central nervous system. Reports should include: 1) main purpose or function of the system 2) main organs, glands or parts of the system 3) function of each organ or part of the system. A diagram of the system is optional.

PROJECT: C.H.A.N.G.E.
6TH GRADE CURRICULUM
BASIC ANATOMY

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PHYSICAL HANDICAPS

INTERMEDIATE LEVEL

PROJECT: C.H.A.N.G.E.
6TH GRADE CURRICULUM

INTRODUCTION: PHYSICAL HANDICAPS

Now that the students have studied the normal physiology of the skeletal and muscular systems, they are ready to learn about physical handicaps. In this unit, they will study a broad spectrum of physical handicaps. Because of the copious materials, the teacher may want to choose those which they feel will best benefit their individual class. The first three plans are very important as background material and should not be excluded.

Unit	Objective	Concept
Physical Handicaps	The student can define the term physical handicap.	People who have lost the use of some part of their body due to illness, injury, or accident are physically handicapped.
	The student can identify some of the causal factors of the more common physical disabilities that create motor function impairment.	Physical disabilities can be the result of accidents, heredity, birth defects, drugs taken by the mother during the prenatal period, maternal illness during the prenatal period, and illness causing central nervous system damage. Some of the common visably apparent physical disabilities that create motor function impairment are: A. Amputation - surgical removal of a limb or body part. B. Cerebral Palsy - the most common motor disorder is a condition caused by damage to the motor area of the brain usually occuring before or at birth. Speech difficulties are common with this condition also. C. Multiple Sclerosis - progressive central nervous disease affecting motor control. Results in many symptoms involving sensory and motor systems. D. Poliomyelitis - disease often causing paralysis. E. Spina Bifida - a condition in which the spine fails to close causing differing degrees of paralysis of the legs and other body functions.

PROJECT: C.H.A.N.G.E.
6TH GRADE CURRICULUM
PHYSICAL HANDICAPS

Unit	Objective	Concept
Physical Handicaps (Cont.)	The student can identify some of the causal factors of the more common physical disabilities that create motor function impairment (Cont.)	F. Spinal Cord Injury - impairment causing sensory/motor loss of two or more functional abilities. G. Birth defects involving one or more limbs.
	The student can identify areas of difficulty, special needs, and ways of dealing with physical disabilities.	There are several areas of difficulty to be dealt with by the physically handicapped person: A. Mobility is difficult for some physically handicapped persons due to limited or complete inability to use their legs. Driving also may be difficult or impossible for some. B. Education may be difficult because of limited mobility, inability to write, and special medical problems. C. There are limitations on employment choices which may be due to mobility difficulties, communication problems and special medical considerations. D. Recreation and social limitations are encountered (dancing, sports, etc.) E. Self-reliance skills are often difficult to master (dressing, feeding, care of family eating, bathing, toileting, cooking, living alone, etc.) F. Architectural barriers in the home and community often make life difficult for the physically handicapped individual.

Unit	Objective	Concept
Physical Handicaps (Cont.)	The student can identify areas of difficulty, special needs, and ways of dealing with physical disabilities.	G. Special medical problems often play an important role in the physically handicapped individual's life. Some of these are: sores due to immobility (bedsores), special care of the point of amputation (stumps), catheter to drain urine (indwelling catheter), circulation in paralyzed limbs, healing, bladder infections, bowel problems, deformaties due to paralysis of limbs, atrophy of muscles not used, etc.. H. Financial difficulties may occur due to the high expense of purchasing and maintaining braces, prothesis, wheelchairs, physical therapy, special clothes, special devices, etc.. The physically handicapped person can learn to use special techniques and devices to deal with various situations. Some of these are: A. Over-development of a sense or part of the body for maintenance, coordination and balance. B. Special equipment in cars. C. Extenders for reaching. D. Braces. E. Prothesis F. Exercise equipment (to overdevelop certain parts of the body to compensate for other parts of the body.

Unit	Objective	Concept
Physical Handicaps (Cont.)	The student can identify areas of difficulty, special needs, and ways of dealing with physical disabilities. (Cont.)	G. Special clothes and shoes. H. Crutches. I. Wheelchairs. J. Special eating devices. K. Walkers. L. Canes. M. Mouth devices for writing, eating, and painting. N. Electric lifts for stairs, bathtubs, etc.. O. Communication devices: 1. Electric typewriter. 2. One handed typewriter. 3. Manual or electric communicatio board. 4. Automated tele-communication system. 5. Writing harness:_ special pencil holder that fits hand. 6. Magnetized wrist harness to hold hand to metal tray or table to write. 7. Metal suspension writing frame to attach on wheelchair to support arm.

PROJECT: C.H.A.N.G.E.
6TH GRADE CURRICULUM
PHYSICAL HANDICAPS

Unit	Objective	Concept
Physical Handicaps (Cont.)	The student can identify areas of difficulty, special needs, and ways of dealing with physical disabilities (Cont.)	P. Reading aids: 1. Special book holders (hooked to wheelchairs). 2. Automatic page turner. 3. Head pointer with harness; for page turning, typing, pointing, etc.. 4. Specially designed tables; cut-out for wheelchair or standing table for support. Q. Electric Scissors. R. Breath control devices (inhaling or exhaling); to activate certain systems such as a wheelchair. S. Universal cuff for utensils. T. Numerous devices designed for individual problems.
	Student recognizes that handicapped (physically) people are worthwhile individuals.	Physically handicapped people have the same basic needs as people who are not physically handicapped. Physically handicapped people may have difficulty coping with the misconceptions some people have about their handicaps.

PROJECT: C.H.A.N.G.E.
6TH GRADE CURRICULUM
PHYSICAL HANDICAPS

ACTIVITY:
Physical Handicap
Definition sheet

OBJECTIVE:

Students know the terminology and definitions associated with physical handicaps.

MATERIALS:

Physical Handicaps Definition sheet and reference materials.

PROCEDURE:

Have the students go to the learning center and look up the terms on the worksheet and write down the definition. Collect those sheets to used in the next lesson.

PROJECT: C.H.A.N.G.E.
6TH GRADE CURRICULUM
PHYSICAL HANDICAPS

NAME______________________________

PHYSICAL HANDICAPS DEFINITION SHEET

1. Amputation -______________________________
2. Cerebral Palsy -______________________________
3. Multiple Sclerosis______________________________
4. Poliomyelitis______________________________
5. Spina Bifida______________________________
6. Spinal Cord Injury______________________________
7. Birth defects______________________________
8. Physical Handicap______________________________
9. Architectural barriers______________________________
10. Prothesis______________________________

PROJECT: C.H.A.N.G.E.
6TH GRADE CURRICULUM
PHYSICAL HANDICAPS

ACTIVITY:

1. Film Strip "Frank"
2. Comprehension exercise from the Teacher's Manual

OBJECTIVE:

1. Students will have an awareness and sensitivity to disabled and handicapped people.

2. Students will know the problems of the Physical Handicapped.

MATERIALS:

1. Film Strip and Cassette "Frank" (Pomfret House)

2. Comprehension activity P. 40 from the Teacher's Manual which accompanies the film strip and cassette.

PROCEDURE:

After viewing the film strip give the Comprehension quiz on P.40 of the Teacher's Manual. This may be given orally. The class may then check their answers and discuss the film. Answers are given on P.43 of the manual.

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PHYSICAL HANDICAPS

ACTIVITY:

Film "A Day in the Life of Bonnie Consolo".

OBJECTIVE:

Students know some of the compensation technique's used by a physical handicapped person.

MATERIALS:

Film "A Day in the Life of Bonnie Consolo". (Barr Films)

PROCEDURE:

After viewing the film discuss it by having the students make a list of all the things they observed Bonnie being able to do in the film. Ask for volunteers to try some simple simulation tasks using their feet. They might try picking an object off the floor, adjusting a desk or chair, opening the door, trying to write a letter or two or make a simple design on paper.

PROJECT: C.H.A.N.G.E.
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PHYSICAL HANDICAPS

ACTIVITY:

Film, "Diana"

OBJECTIVE:

Students know the mobility and coping problems of an amputee

MATERIALS:

Film "Diana" (Encyclopedia Britannica Educational Corporation 1978)

PROCEDURE:

After viewing the movie, discuss the film using the following questions as an aid for the discussion.

1. Why did Diana have her leg amputated?
2. What types of activities does Diana engage in?
3. Define amputation.
4. In what three ways can a loss of a limb occur?
5. What is another name for an artificial limb?
6. How did Diana feel at first about the loss of her leg?
7. What helped Diana adjust to her new leg?

PROJECT: C.H.A.N.G.E.
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PHYSICAL HANDICAPS

ACTIVITY:

Film "The Truly Exceptional Carol Johnston".

OBJECTIVE:

Students understand the need to achieve ones potential is not only confined to people who are "normal".

MATERIALS:

Film: The Truly Exceptional Carol Johnston (Walt Disney Productions)

PROCEDURE:

After viewing the film use the following questions for discussion:

1. How did Carol's attitude contribute to her success?
2. What types of excercises did Carol need to do to become a good gymnast?
3. Did she suffer any drawbacks?
4. What difficulties did she encounter?
5. What dangers did she face?
6. What type of amputee was Carol? eg. surgical, congenital traumatic?

PROJECT: C.H.A.N.G.E.
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PHYSICAL HANDICAPS

BOOK REPORTS

ACTIVITY:

1. Mister O Brien
2. At The Mouth of The Luckiest River
3. Antonio
4. Mine for Keeps
5. Tall and Proud
6. Don't Feel Sorry for Paul
7. What Do you Do When your Wheel Chair gets a flat tire?

OBJECTIVE:

For interested students to attain further insight into the problems and coping mechanism faced by the physically handicapped child.

MATERIALS:

1. Mister O'Brien by Prudence Andrew (Thomas Nelson Inc. 1973)
2. At The Mouth of The Luckiest River by Arnold Griese (Thomas Y. Crowel Company 1973)
3. Antonio by Bronson Potter (Atheneum 1969)
4. Mine For Keeps by Jean Little (Pocket Books 1976)
5. Tall and Proud by Vian Smith (Pocket Books 1976)
6. Don't Feel Sorry for Paul by Bernard Wolf (J. B. Lippincott Co. 1974)
7. What Do You Do When Your Wheel Chair Gets a Flat Tire? (New York 1978)

PROCEDURE:

Allow the interested Students to choose a bbok to read and report on. The report should include the title, author and a brief summary. These reports may be shared with the class.

PROJECT: C.H.A.N.G.E.
6TH GRADE CURRICULUM
PHYSICAL HANDICAPS

ACTIVITY:

Physically handicapped cross word

OBJECTIVE:

Students know the terminology and definitions associated with physical handicaps.

MATERIALS:

1. Physical Handicap Definition Sheet
2. Physical Handicapped Cross Word

PROCEDURE:

Using the definition sheet the students did in lesson one, the students complete the crossword. Correct the puzzle with the class as a follow up.

ANSWER KEY:

ACROSS

1. Spinal Bifida
2. Cerebral Palsy
3. Architectural Barriers
4. Multiple Sclerosis
5. Poliomyelitis
6. Spinal Cord Injury

DOWN

7. Amputation
8. Physical Handicap
9. Birth defects
10. Protheses

PROJECT: C.H.A.N.G.E.
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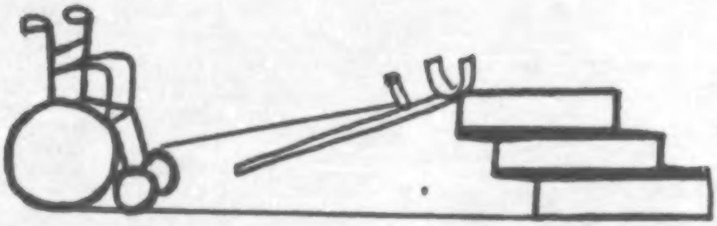
Clues to Physical Handicapped Crossword:

ACROSS

1. A condition in which the spine fails to close causing differing degrees of paralysis of the legs and other body functions.
2. A condition caused by damage to the motor area of the brain which may affect speech.
3. Obstacles that make it difficult for the physical handicapped person to get around.
4. A progressive central nervous disease affecting motor control
5. A disease often causing paralysis
6. Impairment causing sensory/motor loss of two or more functional abilities.

DOWN

7. A surgical removal of a limb or body part.
8. A name describing any condition in which a person has lost the use of some part of their body due to illness, injury or accident.
9. Any abnormal condition a person is born with.
10. An artificial device to replace a missing part of the body.



6TH GRADE CURRICULUM
PHYSICAL HANDICAPS

PHYSICAL HANDICAPS CROSSWORD

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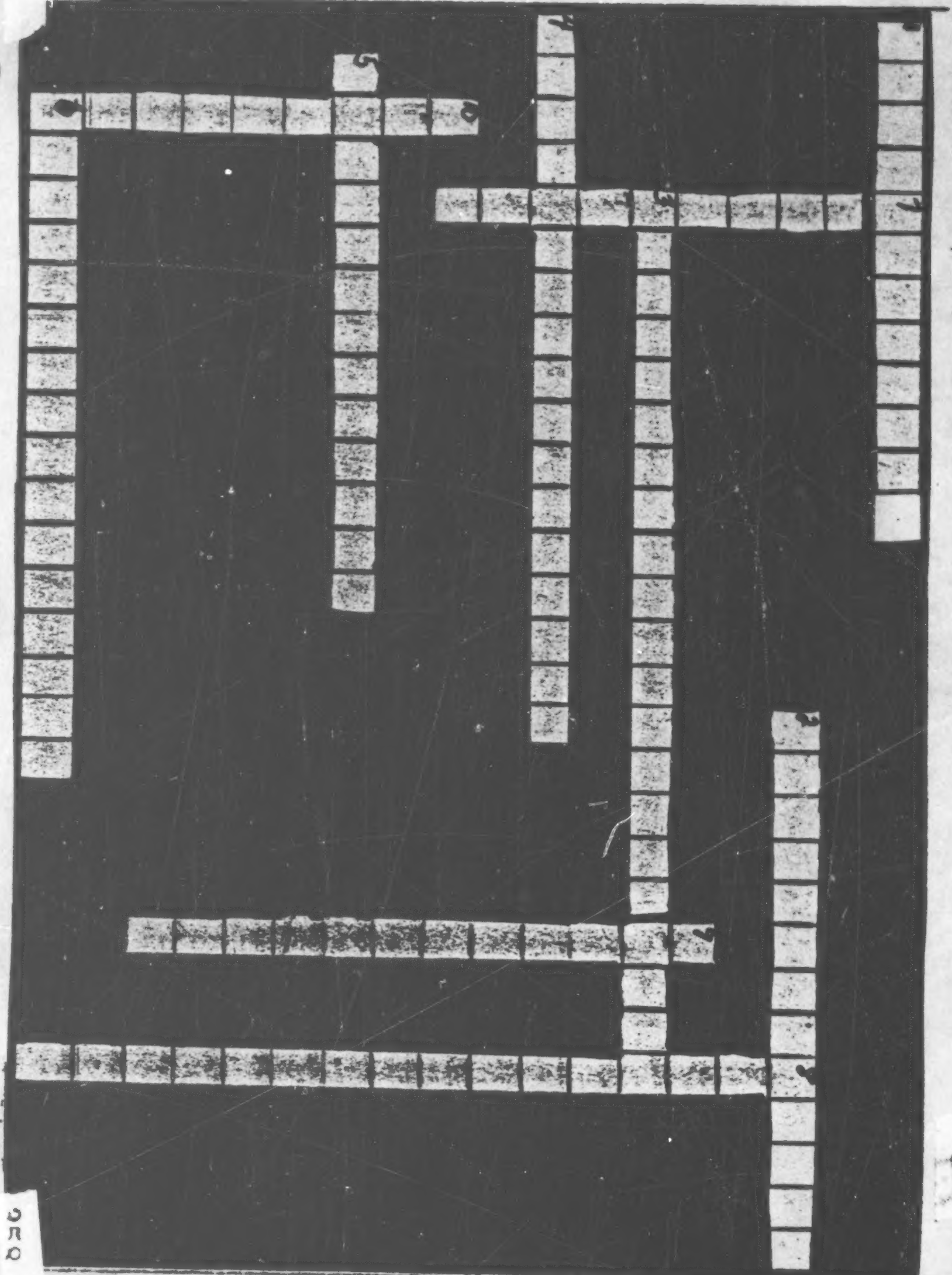
NAME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PROJECT: C.H.A.N.G.E.
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PHYSICAL HANDICAPS

ACTIVITY:

Book Report: Biographies of famous Handicapped Individuals

OBJECTIVE:

Students understand that a handicapped person may achieve honor and recognition from society.

MATERIALS:

Encyclopedias and biographies of famous individuals with handicaps.

PROCEDURES:

Have each member of the class write a report on a famous person with a disabling condition. These reports may be shared orally with the class. Some possible subjects might include: Glen Cunningham, Wilma Rudolph, Franklin D. Roosevelt or Robert Louis Stevenson.

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ABOUT THE STAFF

STAFF:

Director	Donald Martin
Coordinator	Sherry Smith
Assistant Coordinator	Alan Balter
Medical Consultant	LaVerne Galzin
Media Consultant	Cynthia Foulkes
Curriculum Coordinator	Karen Harper
Curriculum Advisor	Kathleen Delaney
Curriculum Advisor	Robert Honkisz
Graphic Artist	Karen [illegible]adden
Evaluation Consultant	A. Edward Ahr

Donald Martin, Project Director, holds B.A. and M.A.T. degrees from Harding College in Arkansas. He has worked as Assistant Principal at the Junior High School level, Director of a Demonstration Center for Gifted Children, and as Director of Federal Programs. As Program Director for Project C.H.A.N.G.E., he is responsible for the overall administration of the project.

Sherry Smith, Project Coordinator, has the B.A. from College of St. Francis in Illinois and M.S. from Chicago State University. Her previous experience includes classroom teaching and speech pathology at the elementary level. As Coordinator of Project C.H.A.N.G.E., she is responsible for the day-to-day operation of the program including grant writing, curriculum planning, and design of assessment instruments.

Alan Balter, Assistant Project Coordinator, has B.S., M.S., and Ph.D. degrees from the University of Illinois. He has worked as a teacher of retarded children, researcher, and university professor. As Assistant Coordinator, he helps with the daily functioning of the program and project dissemination.

LaVerne Galzin, Medical Consultant for the project, is a registered nurse who also holds the B.S. degree. She has wide experience working as a hospital nurse, public health nurse as well as a school nurse. In her role as Medical Consultant she explains nursing and medical information and strategies to program staff and is the program laisson to the medical profession.

Cynthia Foulkes, Media Consultant for the project, holds the B.S. in Education from Illinois State University and the M.S. in Education from Chicago State University. Her experience includes working as a School District Librarian and Director of a Learning Resource Center. She is responsible for ordering and processing all program materials as well as assisting program staff plan and execute audio-visual presentations.

Karen Harper, Curriculum Coordinator has the M.A. degree in Learning Disabilities and has many years of teaching experience in special education. She has developed the Kindergarten and Primary grades curriculum and supervised curriculum development at other levels.

Kathleen Delaney, Curriculum Advisor, has a B.A. degree from St. Xavier College in Illinois. She has worked as a teacher's aide in Project Head Start and as a teacher in the elementary grades. Her major responsibilities have been writing the project curriculum and lesson plans for grades 4-6.

Robert Honkisz, Curriculum Advisor, has the B.S. degree from the University of Illinois. He has worked as a physical education teacher in the elementary grades. His primary responsibilities have been writing project curriculum and lesson plans for grades 7-8.

Karen Madden, Graphic Artist, holds the B.S. degree from Northern Illinois University and the M.S. from Illinois Institute of Technology. She works as an Art Teacher for children between Kindergarten and 8th grade. Her major responsibility for the project involves producing original artwork for program materials.

A.Edward Ahr, Evaluation Consultant, has the B.S. and M.S. degrees from the University of New Mexico and the Ed.D. degree from Loyola University in Chicago. His work experience includes classroom teaching, school psychology, school administration and university teaching. His project responsibilities involve designing assessment techniques, statistical analysis of data and program evaluation.

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